

University of South Florida
College of Engineering Advisory Board Meeting Minutes
April 12, 2013

Advisory Board members present: Chuck Black, Robert Garcia, Fermin Diaz, John Bucher, Bill Bracken, Ed Copeland, Robert Andrew, Alan Brannan, Tom Trotter, John Shearer, Bill Shepherd, Alicia Sullivan.

College of Engineering staff present: John Wiencek, Rafael Perez, Beth Fontes, Major Alston, Jose Zayas-Castro, Jason Bittner, Autar Kaw, Ken Christensen, Janet Gillis.

Guests present: Harry Helmrich, Julie Zoldos, Evan Kroske, Tom Krisa.

Meeting was called to order at 12:40 by Chairman Black

Autar Kaw, 2012 U.S. Professor of the Year, gave a presentation on MOOCs (massive online open courses). He gave an historical timeline of open / courses that began in 1957.

- Chuck Black asked if one could get a degree through a MOOC. Autar answered no.
- Robert Garcia asked if there would be an issue of accreditation should degrees go online. He mentioned the PE can be done online
- Autar said to eliminate academic dishonesty, Pearson is offering testing centers.
- Bill Shepherd asked if there is a future model of a university 20 years from now that would include MOOCs.
- John Bucher asked if MOOCs can drill down to the high school level. Autar said students are taking them to increase their resume for college.
- Autar summarized that these opportunities are currently for well-off students and they don't serve poorer students very well since they tend to have too large a cognitive load. It could create a wedge between the upper and lower incomes. We will be overlooking some of the best and brightest.

John Wiencek recognized Autar for being named 2012 US Professor of the Year. He stated the college is extremely lucky to have an undergraduate teacher of his caliber. He introduced the new board members – Bill Shepherd, Alicia Sullivan and John Shearer. He asked Janet Gillis to provide the new members with the comparison of the corporate environment versus academia. He announced the latest USNWR graduate program rank of #69 (public institutions). His goal is to be in the top 50 (public institutions) by the end of his second term (2017). The greatest progress within the colleges has been in successfully executing on our ideas, such as:

- BEST program
- Fundraising for the renovation and named spaces
- Cyber security research outreach

He asked Janet to re-send Bill Shepherd the board by laws.

Robert Andrew gave the Engineering Alumni Society report

- Bullarney raised \$25,000 this year. With next year being the college's 50th anniversary, the planning committee intends to bring the event to the Alumni Center on campus tentatively scheduled for March 22, 2014 with a goal of raising \$50,000.
- He invited board members to the May 4 Induction to the Profession Ceremony
- Upcoming events include a summer bull session (TBA) and October's homecoming parade

Jason Bittner Announced CUTR just received a \$4.5 million grant for bicycle and pedestrian safety studies and then provided an overview of Center for Urban Transportation Research.

- CUTR has received increased federal money which now accounts for just under half of their awards
- CUTR's National Transportation Center destination is one of only two in the nation. They are the research lead in collaboration with other centers in the US.
- CUTR is fully supported by grants and the only USF faculty member covered through USF expenses is Jason. CUTR is generally arranged to cover its program costs exclusively through external funding with some college administration support.
- This is CUTR's 25th anniversary and they are celebrating with a year-long list of events.

CUTR has many relations with the FL DOT because of the unique skills of the researchers in niche areas.

John Shearer asked if CUTR was involved with the proposed high speed rail. Jason responded they weren't.

Bill Bracken asked if there is anything being worked on pertaining to infrastructure improvement where the infrastructure is deteriorating. Jason said that falls under Asset Management and while CUTR is not actively involved it is very concerned about transportation infrastructure because it impacts their work.

BEST Program

Professor Ken Christensen introduced the BEST (Bulls Engineering Success Training) program which is one of two goals that are the result of the career committee initiative work last year.

BEST focuses on capstone projects and is based on the UF IPPD program which was inspired by programs at Brigham Young University and University of Iowa. Harris, Lockheed Martin and Jabil are all working with UF's IPPD program.

The premise of the BEST program is that industry has access to teams of students who work on back burner projects or other type of projects that the organization would normally not be able to implement due to time or financial constraints. The financial investment by the organization is \$25,000.

An internship could be the next step in BEST and subsequently permanent employment. BEST serves as a vehicle to see students in action and the ability to offer them employment before students are interviewed by other organizations.

Ken sent round a signup sheet for board members who might be interested in learning more about BEST or have a project for BEST.

Alan Brannan asked if this was a scale up of the former TA programs. Ken replied no, because BEST focuses on undergraduates, but if funding exists for a TA to work with the teams, graduate students get involved in that respect.

John Bucher asked if the student teams are doing apps. Ken said they have done apps for both Nielsen and CAE.

Bill Shepherd asked how the teams are formed. Ken said that they take recommendations by dept. and it's selective. Bill suggested the students should be allowed to form their own teams in a competitive nature.

John Bucher asked if graduate student were involved but Ken answered that BEST is for undergraduates only.

Alicia asked if the time line is flexible and can they do multiple iterations. Ken replied that projects are two semesters bound, but it was possible for one group to complete one phase, while a later group completes a subsequent phase.

Harry Helmrich asked if this would replace the senior semester and Ken replied yes in some cases.

John Bucher asked if any of the groups have done Six Sigma work. Ken responded no.

John Wiencek added that Mini Circuits is focusing two projects on reliability testing which will be multidisciplinary.

Chuck reminded the Board that committee reports are the results of acted upon initiatives which will serve the foundation of the next steps for the board to act on.

Leadership in Engineering Program

The Leadership Committee reported on the pilot program of the Leadership in Engineering.

Tom Krisa, program instructor, thanked key contributors especially the leadership of the board which set the direction and time frame, and set boundaries. The Dean's office, academics and marketing helped support the program and did the leg work. Eight advisory board members were integral in developing the program and a special thank you to Frank Busot for his leadership.

Program Students Feedback

What did you learn and what is the value of this to future students?

Harry Helmrich, president of student chapter of AIChE, found it helped him in running meetings more effectively. Working with different personalities helped with some of this. He was able to apply it directly and immediately. He thinks the program earlier in his academic career would have been wasted. Senior year was the most effective for him. He would like to see more students offered the opportunity and more support from the board.

Evan Kroske offered thanks to the board for the opportunity. The program had been immensely beneficial to him and it's hard to condense it in a few words, but he offered three observations.

1. Course made him much more confident in his public speaking ability, especially extemporaneously.
2. Work on facilitating discussions in group was helpful during the project by driving to action items
3. He now has a toolbox of persuasion techniques that he was completely unaware of before. He has been using them both in business and personal situations. Previously, he used only reason, which is not effective.

He believes offering the program earlier in the academic sequence would have helped him.

Julie Zoldos sees this course as a stepping stone to graduate school. This is nothing like supervisory work, which she thought it was. She came out of her shell and also learned how to be more persuasive. She met many people from other academic programs and learned a lot from them. She made great connections and used a lot of the tools, especially the coaching model. She has been recommending it to others if

they get the opportunity. She thought it was important for industrial engineers since many of them will be managers.

Bill Shepherd asked if the program has an ethics portion to it. Tom replied that ethics was deliberately left out because there is a separate ethics course, although the program addressed values.

Bill Shepherd said he sees the mind set of people in the defense industry suffers because they are not clear about ethics. He suggested that should be included and it would give engineers confidence in their work.

Tom Krisa added that developing the right culture is a very important component.

John Bucher asked how a company deals with recalls could be used as an example of ethics.

Tom Krisa said the student survey asked how they thought we could improve the programs. They wanted more of the topics and exercises and activities and thought it should be a graded course but for specific students not just anyone.

Bill Shepherd added that people should be taught to throw the rule book away and be innovative on the spot in crisis situations by teaching them how to think out of the box.

Rafael Perez said he would like to see everyone who wants to take the course should have the opportunity.

Bill Shepherd asked the students if they could log in to a see the video to take the course would that be helpful. Harry Helmrich said that interaction was the key component of the course. Evan Kroske added that the practical application was most impactful.

Outcomes

Tom Krisa said the interaction was the real breakthrough and everyone changed week-by-week in both behavior and mindset. The program is expanded for fall semester to two sections of 25 students each for the full semester. He will continue to welcome board members to instruct a class. In the future he hopes to expand beyond two classes per session.

Fermin Diaz added that the reason this was successful is because we found the right person to lead this program in Tom Krisa. He took this on as a personal challenge and through his assistance came the success of the program.

Tom Krisa added that everyone involved helped to expand this lesson because they had such passion for making it work.

Rafael Perez added that there is a great symmetry between being the best and leadership.

Chuck Black added the pilot was a success and it provides a good platform to go forward from here. The hardest part is getting the first one off the ground.

Government Relations

Robert Garcia gave a report on government relations by describing it as an onion – peeling back each layer to get through to the center. He would like to pursue the opportunity to work with school board local governments.

He would like to sell the USF engineering brand and make presentations to these boards because they are always looking for interesting projects. The county gives businesses money from time to time after a presentation and there is no reason why we can't do that, too. These groups don't have a lot of money at the moment but we should be doing this now for when they do have money.

Now that we have created a contact document for government officials and school board, the next step is to identify government officials that have engineering degrees. Janet Gillis will look for the degrees and add them to the list of local government officials.

Robert Garcia proposed adding a networking module to the leadership course and he will volunteer for that segment. Knowing how to network is very important and also how students should dress for business.

Fermin Diaz added that this should have been part of the modules.

Bill Shepherd suggested that we shouldn't sell the USF brand, but sell the future. Everything in government and defense segments is outsourced and someone has to turnout innovative ideas. Sell the future and what it looks like 20 years from now.

Careers Committee

John Bucher gave a report on Career initiatives. He reported that he met by phone with Mary along with Ed Copeland. She has a program in place but not everyone is interested and she has to sell it to the students. Mary is presenting a new program in the fall and as soon as it is implemented it will provide an inventory of student resumes the companies can use if they want to approach a student.

Ed Copeland credited the dean for his wise counsel along the way. They are now ready to take this program to the next level.

John Wiencek added the college needs a dedicated contact person for careers, but the university is unable to fund it. The College hopes to have some state funding next year.

Taking resumes to employers is a better idea as opposed to having them provide jobs to students.

Chuck Black added that this is still viable as soon as the situation becomes right.

John Wiencek added that not every company can afford a \$25k BEST project and an internship is a good alternative.

Bill Shepherd suggested developing a monster dot com in reverse with students posting resumes that companies can view online.

John Wiencek added the State is tracking this metric for funding in the future.

Tom Trotter asked how much it would cost to fund this position to manage the internship program. He suggested companies could provide funding for the position which would be a valuable to them for recruiting.

Bill Shepherd said maybe the State could give a tax break to companies if they hire interns free of charge.

Fermin Diaz said engineering students cannot be hired for free, by law, if they are doing productive work.

Tom Trotter added the College needs an administrative person to do this work and many colleges have successful programs.

Robert Garcia and Tom Trotter both said their companies don't hire anyone just out of college unless they've done an internship and at least 50% of the students stick with the companies after the internship ends.

John Wiencek said someone could be hired in the mid to upper thirties. We need a people person. Tom Trotter offered to work with the person to make it successful. One of the most important things Tom sees is that companies want and expect connections to universities.

Development

Beth Fontes and Major Alston reported on recent Donations and Foundation activities. The Unstoppable campaign is coming to a close. The college exceeded its goal, by \$80 million but the majority of the \$99 million raised was in-kind gifts of software licenses by Agilent Technologies.

Current Solicitations:

- Mini Circuits - \$945,000 for an Open Design Lab, Design / Manufacturing initiative and two BEST projects.
- Harris Corporation Foundation - \$250,000

- National Instruments - \$100,000 of Labview Software (in-kind)

Recent Gifts:

- Tampa Armature Works - \$100,000 Hall of Flags naming
- Progress Energy - \$110,000 power and energy systems teaching lab
- Jack W. Roberts Endowed Scholarship - \$30,000 for civil engineering majors
- Maxi-Blast - \$25,000 to support society of Automotive Engineers
- Bracken Engineering - \$20,000 to support Bracken Engineering Lecture Series
- Sciperio - \$300,000 Electrical Engineering Echo Chamber (in-kind)

Upcoming Events:

- April 28 – San Francisco Bay Area Alumni Reception
- May 4 – Induction to the Profession Ceremony at USF
- Oct. 4 – Heart of Gold Scholarship Luncheon
- March 27-29, 2014 – ASCE Southeast Student Conference hosted by USF

New Business

Bill Bracken, in his capacity as PE Board vice chair offered ideas where companies could participate when necessary and offer the PE exam. Bill said that the placement rate is 40-60% of graduating engineers finding a job in their field within a year with a PE.

The percentage of Florida schools that require a PE exam registration for graduation is dropping. Twenty five percent of the 2,700 students never show for the exam even though they are registered. FL schools are dropping the requirement since the pass rates are too low. ABET requires that as a metric. He believes that academia is anti-licensure.

The PE Board is taking the position of leading an effort and as an example Florida Atlantic has done a great job of promoting itself through the PE exam. FSU dropped the PE test requirement. USF dropped the requirement many years ago because students wouldn't show up for the test. One decision to drop it was so it wouldn't look like so many fails.

Fermin Diaz added that civil engineering requires the PE because they offer services to the public and it is to protect the public.

John Wiencek said the college encourages the students to take the PE exam, but the 30 hour rule with NCEES is not in step with ABET. By forcing the issue, NCEES is basically saying that ABET isn't doing its job by requiring 30 hours.

John said he will contact Bill Bracken to discuss this.

Passing of the Gavel

John Wiencek praised Chuck Black's leadership and that he has been instrumental in getting the board to the successful conclusion of several initiatives and also by throwing out what didn't work. His leadership has been invaluable. Chuck was given a plaque to commemorate his board leadership by John Wiencek.

Chuck Black passed the gavel to Robert Garcia who will now be Chair for the next year.

Robert Garcia stated that wants to set Board goals for the next seven years. He further added that the Board should assess its weaknesses and strengths. He cited that engineering doesn't have enough alumni involved in government and often the money is going to business alumni. The state of the economy is also affecting engineering.

He stated his proposed goals for the next year are:

- Create a student networking module
- Expand the career development plan
- Moderately shape the behavior of our engineering graduates

Bill Shepherd added that the College should decide what it wants to be. We should look toward the youth for direction. Ask what are the questions we should be asking?

John Wiencek asked everyone to send seeds of action items to either him or Robert for next meeting.

Bill Shepherd suggested the Board should be working on the next strategic plan.

There was no further business.

Chairman Garcia adjourned the meeting at 4:45 p.m.

Respectfully submitted: Janet Gillis