

UAA College of Engineering Advisory Board

Friday, April 22nd, 2016, 7:30-9:30 am

Location: Engineering & Industry Building, Room 413

Meeting Minutes

I) Welcome and Introductions

Board Chair Loren Lemman called the meeting to order at 7:30 am, and welcomed all of those present:

Board Members – Melissa Branch, Paul Brooks, Jack Colonell, Dan Fawcett, Mark Frischkorn, Virginia Groeschel, James Hemsath, Alex Hills (via phone), Jenny Jemison, Loren Lemman (Chair), Boyd Morgenthaler, Richard Reich, Michael Todd, Steve Weaver, Jon Zufelt

Absent Board Members: Derek Christianson (Excused), Pat Coullahan (Excused), Bruce Davison (Excused), John Lau (Excused), Scott Pessetto (Excused), George Skladal (Excused)

Ex-Officio Advisory Board Members – President Jim Johnsen (via video conference), Chancellor Tom Case, Dean Doug Goering (telephonic), Mark Ayers (excused), Rob Barnett (excused), Berry Kirksey (excused), Warren Lucas (excused), Nathan Wardwell (excused), Ann Ringstad (excused)

UAA/CoEng Staff and Faculty Members – Dean Fred Barlow, Kenrick Mock, Tom Ravens, Kim Riggs, Jayna Combs, Ellie Soto.

Loren Lemman moved to formally thank now-retired board members John Aho and Catherine Call for their service on the board.

Motion carried, without objection.

II) Board Housekeeping

A Approval of the Agenda

Loren Lemman requested to change the order of the agenda to allow President Johnsen to speak before Chancellor Case, to enable him to attend to other affairs.

Motion carried, without objection.

B Approval of the Minutes

Loren Lemman moved the minutes be approved as presented.

Motion carried, without objection.

III) Special Order of Business

A UA President Dr. James “Jim” Johnsen

- President Jim Johnsen introduced himself and thanked everyone for attending. He expressed his gratitude toward the Advisory Board for its service and the progress that has been made, in particular, emphasizing the collaboration between the UAA and UAF Advisory Boards.
- He went on to emphasize the importance of the UA system for Alaska. UA universities are essential to the State’s higher education needs and work force development. The universities are being impacted by budget reductions, and will be impacted by more cuts in the near future, reaching upwards of 20%, making it essential that we pull through these

challenges and work toward the future by utilizing sound strategies. The main strategy to combat these issues will be campus specialization, with each branch of UA campuses eventually focusing – primarily – on a more specific type of education. He made it clear that this did not mean that Engineering would leave UAA and be located only in Fairbanks, acknowledging that Engineering education is very sought after, with value to Alaska in having two programs.

- Chairman Leman asked, “How are you going to deal with budget reductions of this magnitude?”
 - (i) President Johnsen responded that he and the Regents plan on assessing cost and importance ratios for many aspects of the UA system, and suggested that nothing was off the table from being cut. He did emphasize that they plan on cutting positions and funding on the administrative side before making cuts to the classroom and educational experiences of UA students.
- Boyd Morgenthaler expressed his concerns with some possible budget cuts, primarily cuts to engineering research in Anchorage. He asked, “What are your thoughts on cuts of this nature? Do you think they will be included in the plans to deal with the budget?”
 - (i) President Johnsen responded that the plan for the budget issues is currently being edited, in part, based on some of input received, like Boyd’s. He emphasized that, just because one of the UA campuses is designated as the lead in a certain area, does not mean it is the only campus that will be conducting research in that area. He does not wish to see something like engineering research leave Anchorage, as he believes it is an important aspect of the UAA campus.
 - (ii) Boyd Morgenthaler followed up President Johnson’s response by simply requesting that the documents listing the plan to deal with these budget issues be changed to reflect the value of research in Engineering and the other sciences at UAA. He also wanted to assure President Johnsen that this was not an attempt to challenge Fairbanks’ lead role, but merely an attempt to reflect UAA in a more appropriate and true light.
- A board member asked: “In what areas are we looking to produce more revenue to alleviate some of the budget strains?”
 - (i) President Johnsen responded by noting that there are three primary plans of action to achieve this. One is to increase tuition, which is quite low compared to other universities. This will likely go into effect mid-2017, allowing enough time to prepare students for this increase, has although the details have yet to be determined. The second is to introduce a surcharge for Engineering, to be paid in addition to base tuition. This will benefit Engineering by increasing revenue. The last is a public fundraising campaign, pursuing outreach to graduates for private donations to help increase revenue.

B Chancellor Tom Case

- Chancellor Case thanked everyone for their hard work on the Board and for all they have accomplished. He then discussed the budget issues, and how, even though it may have initially appeared that way, he feels strongly that many areas were not going to be severely

cut. One example was the suggestion that the liberal arts were going to take a severe hit, when, in-house programs are highly valued. He made it clear that UAA values the prospect of graduating well-rounded students, and offering access to a diverse selection of subjects is key to this effort.

C Dean's Report – Dr. Fred Barlow

- Dean Barlow thanked everyone for attending, and for their service to the Board. He reported on the new and improved webpage for the College of Engineering and some of the new web-based features that were on the horizon. He also highlighted the introduction of the 2+2 Chemical Engineering program that UAA and UAF have introduced with Washington State University. This program will allow students to pursue a Chemical Engineering degree without having to completely leave the state. Instead, students will spend two years at either UAA or UAF to complete their GER courses, and then finish their degrees at WSU. This will generate more revenue by increasing the number of students who might have simply left the state and attended WSU for four years. This is also beneficial because it is a cost free way to gain more enrollment, as students of this program will primarily be taking GERs that are already offered here. The Dean hopes to promote internships in Alaska to draw these students back during summers and, ultimately, longer term.
- The Dean reported on our Summer Engineering Academies and the expansion of the program to the Mat-Su area for the first time this year.
- The Dean extended an invitation to everyone to attend a reception at 11:30am that day, where scholarship donors and student scholarship recipients were to be honored, providing a wonderful opportunity for them to meet and interact.
- He acknowledged how well the building is being utilized, and mentioned the wide range of activities taking place in the building.
- This led to a report on the progress of remodeling the old engineering building, which should be completed this summer. He also mentioned that the remodeled building will be renamed to avoid confusion between the two buildings.
- Dean Barlow discussed the benefits of introducing higher level courses through the distance education program, to allow more mature students to have more options for specialization, while presenting a cost-effective means of teaching these courses.
- He highlighted the success of our student Tutoring Center, and other efforts toward supporting student success. Pursuing an engineering degree requires a significant workload, making these efforts essential. The foundation for this support is now present in mandatory advising, which helps students stay on track to complete their degrees.
- Another important facet of the plan for the future is to reach out to high schools and other potential students in our community. The Dean has visited most of the high schools in the area, and he plans to continue to form relationships with all of them.
- Dean Barlow acknowledged the importance of eliminating the old thinking that UAA is in competition with UAF. In reality, UA is losing too many local students to schools in the lower 48. UA campuses need to work together to increase enrollment.

- The Dean pointed out that restricting engineering programs to one location in the state would limit the possibility of cross-pollination between various types of engineering. It would also dramatically reduce access for students and likely lead to a reduced number of engineering graduates.
- Questions for Dean Barlow
 - (i) What exactly will the surcharge on Engineering courses look like?
 - (a) RESPONSE: Engineering courses will cost 20% more than non-Engineering courses. The charge will not affect majors overall, simply individual courses.
 - (ii) What do you think is the cause for students choosing out-of-state universities? Is there any research to answer this question?
 - (a) RESPONSE: Part of this is because some students want to go out-of-state simply to experience something new. These other schools have advertising budgets that we are not competing with. UA is on the same scholastic level s as many of our competitors, but the other schools may appear to be on a higher level due to their advertising.
 - (iii) Are more high schools going to offer engineering academies in-house in the near future?
 - (a) RESPONSE: It is possible for more of our high schools to implement these engineering programs. Regarding a time frame, I think it is too soon to see this type of implementation by the fall, but possibly by the following year, we may see these start to pop in local high schools—hopefully, all of them.
 - (iv) One board member commented that there are currently options for high school students to pursue internships. That member also advised that we should utilize what is currently available to the fullest extent before seeking to create more options.

D Sr. Development Officer Comments – Jayna Combs

- Jayna introduced herself and thanked everyone for being there. She brought forward some development highlights, including a generous UAA-wide donation from BP of \$190,000. This will benefit the Summer Engineering Academies and ANSEP program. Another highlight was the donation of the Reindeer Island weather station from Prudhoe Bay, which was donated by American Marine International. Jayna also noted that, in just the previous week, there had been 12 new Engineering alumni donors, showing how alumni are interested in donating. She invited everyone to attend the scholarship donor reception at 11:30 am, as an opportunity to meet some of our donors and scholarship students.

E Student Representative – Udayan Dutta/Co-Chair of the CoEng Student Council

- Udayan introduced himself, and offered some background about himself and clubs on campus. He mentioned that he attended our Summer Engineering Academies from 8th through 12th grades, and he is a strong believer in what these academies can do for students. Student clubs on campus are currently going through a lot of restructuring and rebuilding. This is due to a high volume of students graduating, leaving clubs low on members and leadership. He emphasized the importance of introducing students to working engineers, as a way to help them find their path in engineering. He made a point of

mentioning that students are supportive of instituting the surcharge on tuition. UA universities are significantly less expensive than other universities, and paying more will offer more to the students in the long run.

- Questions
 - (i) Do you see a way to bring high school students to UA as opposed to other universities, and engineering in general?
 - (a) RESPONSE: He suggested that advanced courses like AP classes are very important to help students transition to the college atmosphere. He expressed his gratitude for his exposure to, and his belief in, engineering focused activities and competitions for youth as the gateway for student interest in engineering.
 - (ii) How beneficial do you think it would be for undergraduates to have access to research opportunities?
 - (a) RESPONSE: Udayan is currently participating in undergraduate research through the Civil Engineering program, and is a firm believer in having these opportunities in Anchorage so that companies will not be required to outsource to Fairbanks for student researchers.

F Student-Faculty Project Presentation – ESM Grad Student Jasen Kintner: “Economic Optimization of Fiber Optic Network Design in Anchorage”

- Jasen Kintner introduced himself and thanked everyone for their attendance for his presentation of his capstone project. He described his extensive experience with communications through the military and GCI, as well as his background at UAA as an undergraduate student.
- The project overview focused on building a new, more efficient and economical system for telecommunication by switching from traditional network materials to Fiber Optic network material. He also examined condensing the network by making it more unified and centralized to save money on servicing costs and materials in the long-term. To prove his points, he looked at economics over an eight year period, which showed significant improvements.
- Questions:
 - (i) Alex Hills expressed his desire to communicate further with Jasen Kintner about this topic.
 - (ii) Jasen was congratulated for a job well done, and he continued to discuss the importance of the business side of engineering.
 - (iii) Boyd Morgenthaler asked, “Engineering Economics is currently offered in the senior year. Do you think it should be offered sooner?”
 - (a) Jasen believes it should be offered sooner and possibly in more depth, possibly by adding an additional semester.
 - (iv) “What exactly was the difference that you were discussing with optimization during your presentation?”

- (a) He found the results of using his model of optimization to be quite astonishing. He took a plan that initially was estimated to cost around \$220 million down to around \$100 million. This made the project significantly more feasible.
- (v) “What is the time and cost to repair Fiber versus the previously used copper?”
 - (a) With the new developments, Fiber can often be repaired quicker and cheaper than copper.

IV) Old Business:

- A UAA Engineering Buildings Update – Kim Riggs
 - Renovation of the old Engineering Building is 60% completed, and it should be completed this summer.
 - The parking structure is 90% complete, and there are talks of possibly creating an underpass to connect the old Engineering building to the NSB and east Campus to create a safer route.
 - A tour of the old Engineering Building will commence after the meeting, starting at Kim’s office, where she will have hard hats available and we will then walk to the building.
- B Chairman’s Challenge Review – Loren Leman
 - Loren encouraged the board to participate as much as they can in CoEng activities, and thanked everyone for their attendance and participation.

V) New Business

- A Election of Officers
 - Loren Leman discussed the advisability of planning for a new chair to replace him. With Jon Zufelt’s concurrence and encouragement, he offered the position Vice Chair to Jenny Jemison, who is excited to serve in this position for one year before becoming Chair, to give her some time to adapt to Board leadership. The Board accepted the filling of these positions unanimously.

VI) Persons to be Heard:

- A UAF College of Engineering and Mines Dean – Doug Goering (telephonic)
 - Dean Goering introduced himself and mentioned that he has been working closely with Dean Barlow on a multitude of projects. He is excited about the progress that they have made toward enhancing the distance education courses and the graduate courses. Another thing they are attempting to do is making universal credits, meaning that you can pursue credits at any UA campus and they will all work without the need to transfer credits and hope that courses align enough to be accepted; essentially it would be pursuing single accreditation for all three campuses. This will take a few more years, but it is an interesting proposition. He then mentioned the continued success of UAF in the national Steel Bridge competition.

VII) Committee Reports:

- A Engineering Policy (Boyd Morgenthaler): No report
- B Facilities: No additional report
- C Membership (Loren Leman, Chairmanship Available): Greg Schmidt and Nicole Knox are applicants for vacant positions. Nicole introduced herself and expressed her interest in joining the Board. She is a Civil Engineer who graduated from UAA in 2004, and she thoroughly enjoys

outreach and encouraging youth to pursue engineering. Greg was unable to attend, but his letter of interest and resume were available. The Board accepted these new members unanimously.

D Graduate Research (Jon Zufelt): A meeting with Dean Barlow was held at the beginning of the semester, and things are looking good for moving forward in the future. Many of the points discussed were covered in the Dean's Report.

E Communications (Melissa Branch): No report

F UAA/UAF Joint Committee (Richard Reich): No report, just pleased with the great collaboration between universities at this point.

VIII) Announcements and Member Comments:

A Next Regular Board Meeting will be held on September 9, 2016; location TBD.

B Member Comments: None

IX) Adjournment:

Loren Leman adjourned the meeting at 9:30am. A tour of the old (now being remodeled) Engineering building followed for those who were interested.