

# UAA College of Engineering Advisory Board

Friday, December 2, 2016, 7:30-9:30 am

Location: Engineering & Industry Building, Room 413

## Meeting Minutes

### **Welcome and Introductions**

Board Chair Loren Leman called the meeting to order at 7:45 am, and welcomed all of those present:

Board Members – Melissa Branch, Paul Brooks, Derek Christianson, Jack Colonell, Dan Fawcett, Mark Frischkorn, Virginia Groeschel, Alex Hills (via phone), Loren Leman (Chair), Boyd Morgenthaler, Greg Schmidt, George Skladal (via phone), Jon Zufelt

Absent Board Members: Pat Coullahan (excused), Bruce Davison (excused), James Hemsath (excused), Jenny Jamison (excused), Nicole Knox (excused), John Lau, Richard Reich (excused), Michael Todd, Steve Weaver (excused)

Ex-Officio Advisory Board Members – Student Rep Udayan Dutta, CSE AdBd Chair Rob Barnett, CE AdBd Chair Warren Lucas, GEO AdBd Chair Nathan Wardwell, EE AdBd Chair Mark Ayers (excused), UAF CEM Dean Doug Goering, UAF CEM AdBd Chair Jack Walker, UAF CEM AdBd Vice Chair Chantal Walsh

UAA/CoEng Staff and Visitors – President Jim Johnsen, Chancellor Tom Case, Provost Samuel Gingerich, Dean Fred Barlow, Tom Ravens, Kim Riggs, Jayna Combs, Ellie Soto.

Loren Leman introduced Jack Walker, Advisory Board Chair for CEM at UAF.

Loren presented Sara Pate from ConocoPhillips to the board members and her interest in becoming a member of our advisory board in place of Board member Scott Pessetto who retired and moved out-of-state. The motion to approve Sara was approved, without objection.

### **Board Housekeeping**

#### A Approval of the Agenda

- Loren Leman presented the agenda and asked for be adoption.
- Motion carried, without objection.

#### B Approval of the Minutes

- Loren Leman presented the minutes and asked for approval.
- Motion carried, without objection.

### **Special Order of Business**

#### C Chancellor Tom Case

- Very optimistic with the engineering program. The example it sets of being engaged, effective, and coordinating with UAF is a model for other parts of the University. The Administration considers engineering to be a high priority as it is very important to Alaska.

- Security on campus. He mentioned the disturbing Ohio State University shooting. UAA has a very active program, and had an active shooter exercise here about six months ago. The FBI Anchorage Police Department, and University police participated. University Police Chief, Brad Munn recently had an interview with Channel 11 on the security on campus; how all our staff, faculty, and students are informed on how to handle a situation like that, our notification system immediately reaches students. That training is going very well.
- Strategic Pathways: We just completed a two-day leadership summit sponsored by UA President Johnsen. We had about 100 university leaders from all three universities and Statewide staff.
- Next year, we will reaffirm our accreditation. That is done as an independently accredited university.
- UA 2020, an effort led under the provost and Dean Rashmi Prasad from the College of Business & Public Policy, coordinating efforts a large team throughout the university, to look at where, we're headed over the next three years rather than map out a seven-year future.
- The Regents are emphasizing a focus on Title IX issues, campus safety is extremely important to an effective learning environment. Sexual assault, domestic abuse, all that domain are being emphasized at the federal and state level.

#### D Provost Samuel Gingerich

- Strategic Pathways: The University is working to improve the system. Dean Barlow knows a lot of the work the engineering program has done to set an example of how universities can work together. He mentioned UAF Dean Doug Goering pointed out at the summit that the cooperation of the engineering programs really started with the Facilities.
- A lot of what the same processes the CoEng went through for ABET is what we can expect from the accreditation for NorthWest. This is done every seven years. A significant part of that is establishing clear plans & what we need to focus on in the next few years. Engineering is intimately involved in those processes.
- Question by Loren Leman- Is there anything the College of Engineering should be doing to be of help with the NorthWest accreditation? Answer- There will be opportunities as we go forward.

#### E UAF Dean Doug Goering

- President Johnsen finalized the final funding package for the UAF engineering building. The exterior was done, but the interior is being worked on. Floors, wall partitions, et cetera. We expect to be moving in about a year from now. They have an "Engineering on Display" room. It prompts questions to which we can answer and promote engineering.
- UAF is following UAA in ABET accreditation. UAF is exactly one year behind both the ABET and NorthWest accreditation processes. Dean Goering has been communicating with Dean Barlow about this. He has heard that the accreditors have been focusing on campus safety.
- Strategic Pathways: A few years ago, the universities had a Joint Engineering Advisory Committee. Members from both Advisory Boards had regular meetings, discussing mostly Facilities. President Johnsen has asked for rejuvenation of a Joint Engineering Advisory

Committee. Dean Barlow will be addressing that today. We will want to show some progress toward forming or activating this committee.

F Dean's Report – Dr. Fred Barlow

- ABET came & evaluated ME, CE, GEO, & CSE. CS will be evaluated next year. The final results will be released in the summer. Ideally, we will get six years until the next evaluation. The unofficial result was very, very positive. The only concern they had was we had so many students and not enough faculty. Dean Barlow commends Kenrick Mock, Rob Lang, and the rest of the faculty for their work to produce the reports required by ABET.
- Professional Development Series—Dr. Tom Ravens is organizing this. If interested in speaking, please let him know.
- Engineering Management and Science Management programs have been suspended due to low enrollment. The students currently enrolled may finish, but no new students may enroll.
- Concurrent enrollment. We have agreements with the Anchorage, Matanuska-Sitka, and Kenai Peninsula school districts. Mat-Su will be teaching the first CAD class this spring and see how it goes. \$20/credit hour.
- New robotics club brings ME, EE, and CS together. Iceberg Robotics has a webpage with videos. They will be in a national competition involving a small rover for NASA. There is some opportunity to work with the high school robotics programs.
- Strategic Pathways, collaborative alignment, course numbering, descriptions, joint curriculum committee, joint engineering advisory committee. There will be an annual report. Dan White, Dean Goering, Rob Lang, Bill Schnable, & Dean Barlow were on a committee to put together a simple plan. The plan was presented to the Board of Regents on November 11. That same day, the associate deans, department chairs, and Dean Barlow flew to Fairbanks to work with their UAF counterparts about course numbering and such. The two ME chairs got together, talking about the mutual problems they had at their respective universities and how to resolve them. Very collaborative, very positive.
- Fall 2017, Spring 2018, lots of time to prepare the curriculum, in terms of alignment. Each college has a curriculum committee. We are talking about a common curriculum committee between the two colleges.
- The Joint Engineering Advisory Committee will be a possible subset of this group and some members will be from the UAF Advisory Council.
- Research council is led by Tom Ravens here, and Bill Schnabel at UAF and groups of faculty at both colleges.
- CoEng & CEM are working on collaborative hiring in a complementary exercise.
- There will be another retreat in early 2017. The goal is to have common course numbers and descriptions by May.

G President Jim Johnsen

- Thanked the Chair and Board for allowing him to speak and for their service to the university. Thanked the Deans for their hard work that resulted in such a positive report. Strategic Pathways trusts the College of Engineering. The engineering department is leading

collaboration across the Alaska System. There was no other Strategic Pathways area of focus where the revisit is in five years. Would also like to thank the faculty and students. The students have stepped up and pay more than other students for their education and are willing to invest in that quality education (supplemental tuition). The faculty are critical in delivering the quality education for our students. Our success is due in large part because of work done by this board.

- The Regents met and were very pleased with the progress here in the end of Phase 1 of Strategic Pathways. The Regents have approved what we need in six of the seven areas. The Regents also approved a budget request for FY18, the legislative proposal calls for an increase. UA has taken two years of cuts and is asking for a modest increase to help us reach our goal of meeting 65% of the workforce needs of the State of by 2025. Alaska needs 25% of the workforce to have BS/BA degrees, 40% career tech, licensed vocational training. Last report in 2015 we were at 37%. We have to grow from 37% to 65%, a 76% increase from where we are now. President Johnsen doesn't think it's unreasonable to ask for an increase. He is going to propose \$341.2 million in General Funds for FY18. This amount will decline over time to moderate the dependence on a single source. We are going to phase up tuition, which is currently 19% below the average for western states, not counting the tuition surcharge that Engineering and Business students at both UAA & UAF are currently paying.
- The key to all of this is enrollment. Retention initiatives, campaigning, and advertising the importance of higher education are underway.
- The Regents seemed to be in agreement that UA needs one College of Education, using the School of Nursing as an example.
- Sports: President Johnsen heard clearly the response from the public about its support for the UAA track & ski teams, which had initially been proposed to be cut.
- If you would like to contact President Johnsen, you may do so at his email: [ua.president@alaska.edu](mailto:ua.president@alaska.edu)
- Questions for President Johnsen
  - (i) Alex Hills- How can the Board or individuals help this session when you ask for \$341 million in GF?
    - (a) RESPONSE: We will be happy to come here and talk about how you can assist us, every voice is going to be needed going forward.
  - (ii) Alex Hills- If you do not get the \$341M, what will you do then?
    - (a) RESPONSE: The word was that we were to prepare for another 5-10% reduction. Then, most recently, it was they were going to keep us where, we're at, so \$325M. We will be working with the chancellors and the campuses and planning for the budget we are asking for while simultaneously planning for what we might actually be receiving. One thing we did last year, and will probably be doing again this year, is reallocate towards statewide & Regent's priorities. Our ten-year model starts at \$350MM and goes down from there to \$312MM over time.

- CP Arctic Science Endowment awards have been chosen \$480,000 to five different projects on campus, 3.5 of those projects are engineering.
- Jayna has been collaborating with UAF sciences to get new equipment for both campuses from Alaska LNG.
- Jayna had a very good meeting with BP. It will be continuing to fund UAA Summer Engineering Academies and ANSEP.
- It is very important to have 100% Board giving when submitting proposals. Jayna has donation forms available.
- The unveiling and presentation of the Steel Design Teaching Sculpture, donated by Professor Emeritus Bart Quimby and his wife Sandy, will take place later this morning.

I Student Representative – Udayan Dutta

- ABET visit, was fortunate enough to be there for the reviewing. He confirmed they were very happy with the results of the reviews for ME & EE. One reviewer was very impressed with the questions the students had and remarked several times on the number of non-traditional students we have. We were all in agreement that we have never had a problem with the professor/student ratio because all of our professors are always so available.
- Student Clubs: We have been trying to get our clubs up and running again.
  - (i) ASME & ASCE are struggling, but working on necessary changes.
  - (ii) Iceberg Robotics – some of the best robotics people in the state. Many of the members were FIRST students. We have five former world championship attendees. So, we have an incredibly strong group.
  - (iii) ASCE Steel Bridge, this year, they have a very dedicated group with lots of help from Dr. Hamel.
  - (iv) IEEE has continued its good work in having a professional presenter at every meeting.
  - (v) SWE just had their Women in Engineering night. That went very well.
  - (vi) The College of Engineering Student Council – Worked with Kim on setting up the locker-renting system in the buildings.
- Udayan asked questions of President Johnsen: At what tuition level can we stay competitive with other universities? At what level is it too much? At some point, students will decide that the low in-state tuition will not be a benefit for attending UAA.

J Student Faculty Presentation – Mechanical Engineering Student Isaac Yep on “Igiugig, AK”

- Working on wind turbines. Dr. Peng is doing some research there. They primarily rely on fuel generators. They’ve always been able to trade with neighboring villages by traveling over frozen waterways. They haven’t been able to do that for the past two years. Wind energy is a significantly underused resource in Alaska. It cannot replace petroleum. They eventually want twelve 2-KW systems and have a small farm. They are hoping wind can compete with the cost of fuel.

**Old Business:**

K UAA Engineering Buildings Update – Kim Riggs

- Moved out of all the remote satellite locations and into the EIB & ECB. It’s nice to see all the different program interaction side-by-side.

- We have a brand-new 3D printer
- Comment, the new parking garage makes it nice to be inside when walking all the way across campus.

L Chairman's Challenge – Loren

- We could be doing better in some areas. We are doing well in advocating for the university and supporting the Dean. Loren encouraged Board members to engage in the community and look for opportunities to speak and get involved in things that will raise the vision of the College of Engineering.
- Please update your resume and picture on the website. If you need information changed, please contact Ellie.

**New Business**

M Resolution – John Aho, Founding Member of the Board

- Alex Hills moved to adopt the resolution honoring Dr. John Aho. Seconded by Boyd Morgenthaler.
- Alex Hills: Thanked John for his many years of service. He acknowledged assistance he received from Dr. Rob Lang & Terrie Gottstein on putting the resolution together. The resolution is really a small way to honor John for his many years of service. Motion carried without objection.
- John Aho –Thanked the Board for its commendation. It has been an honor and a privilege to serve on this Board.
- Loren added that John is also an artist who has produced stunning work.

N Engineering 151

- December 9 – 1pm & 3pm. Please consider participating in these Introduction to Engineering seminars.

**Persons to be Heard:**

O Jack Walker – Newly Elected Chairman for the CEM's Advisory Board at UAF

- He is glad to be invited to be here. He learned a lot in just observing. He also appreciates the student participation presentations.
- Commends Dean Barlow and Dean Goering for the collaborative work to deliver engineering education and research to the State of Alaska.
- Comments on the Joint Engineering Advisory Committee. He wanted to report that they have three or four members from the UAF Advisory Council to work with a like-number of members from UAA to collaborate. If members are interested in serving on this joint board, please let Loren or Fred know.

**Committee Reports:**

P Engineering Policy (Boyd Morgenthaler) - This time last year, we discussed the opportunities for collaboration with the ASD and Mat-Su College, focusing on AP credits and inspiring K-12 students to consider engineering. Commends Dean Barlow on his work in that area. Met with the ASD coordinators on October 19 to develop that process. The initiative they started a year ago has developed fairly well.

Q Facilities - No additional report

R Membership – Loren

- Stephanie Mormilo, P.E., MOA Transportation Engineer and 2004 UAA graduate, has expressed interest in serving on the Board. We will act on this at our next meeting she is able to be with us.
- We continue to look for new members, particularly those from disciplines or organizations not currently represented.

S Graduate Research – Jon Zufelt

- Last summer, Jenny Lui put on a workshop or conference on sustainable transportation issues in cold regions. Has been working with Jenny and two co-editors to develop a special collection for the ASCE journal for the Cold Regions in engineering. That will be coming out in the next three-four months.
- Aaron Dotson – Should be coming out in the next six-even months, working with the cold regions engineering group on the fourth edition of the “Cold Regions Utilities Monograph” will be presented at the new ASCE congress on technical advancement in Minnesota in September.

T Communications – Melissa Branch

- Information gathering since our last meeting. Students had a lot of opportunity to speak with professionals at the Women in Engineering Night. Gathering society leaders together for contacts to help the university. Envisioned a smaller group of committee chairs and then a larger group to talk about scholarships and outreach.
- Open house for the university.
- Scholarships – We are in need of judges. If you are willing to review scholarships in late January, please contact Melissa. You can also donate toward the scholarship fund.
- Engineering Displays to communicate with high schoolers, have your organizations highlight a project and give students opportunities to view those and ask questions. We have had a low response from organizations with that recently.
- Student Interactions, presentations in the Student Union
- E-Week Committee is looking for a presentation speaker, coordinating with Alex Hills about that. If you have any other ideas, please contact Melissa.
- Alumni Newsletter – If you have any content you would like to share, please contact Melissa.

**Announcements and Member Comments:**

U Next Regular Board Meeting will be April 21, 2017; No objection.

V Member Comments:

- George Skladal – This was a good *informative* meeting!

**Adjournment:**

Chairman Loren Leman adjourned the meeting at 9:39 am.