

FINAL MINUTES
UAA College of Engineering Advisory Board
April 27, 2018 at 7:30 am – EIB 413
Anchorage, Alaska

1. Welcome, Roll Call and Introductions

Loren Leman, Chair, called the meeting to order at 7:30 a.m. and welcomed advisory board members, staff and guests. Tami Choquette called the roll.

Members Present: Loren Leman (Chair), Melissa Branch, Paul Brooks, Derek Christianson, Jack Colonell, Mark Frischkorn, Virginia Groeschel, James Hemsath, Alex Hills, Jenny Jemison, Nicole Knox, John Lau, Boyd Morgenthaler, Stephanie Mormilo, Sara Pate, Richard Reich, Gregory Schmidt, George Skladal, John Zufelt, Walter Almon (ex-officio), Steve Buchanan (ex-officio)

Members Absent: Pat Coullahan, Bruce Davison, Dan Fawcett, Michael Todd, Steve Weaver, Mark Ayers (ex-officio), Rob Barnett (ex-officio), Nic Choromanski (ex-officio), Udayan Dutta (ex-officio).

UAA CoEng Staff and Visitors Present: Interim Chancellor Sam Gingerich, Interim Provost Duane Hrnrcir, Dean Fred Barlow, Jayna Combs, Tami Choquette, UAF CEM Dean Doug Goering, Lewis Westwick, BP, Ceezar Martinson

2. Board Housekeeping:

A. Approval of the Agenda

The agenda was approved with the following changes: Move Dr. Doug Goering under Persons to be Heard to the end of item #3 Special Order of Business.

B. Approval of Minutes

The minutes from the meeting of December 1, 2017 were approved without any changes.

3. Special Order of Business:

A. Interim UAA Chancellor Dr. Sam Gingerich: Interim Chancellor Gingerich thanked the Advisory Board members for their time and energy spent on behalf of the college. A special thank you to Virginia Groeschel for the ads she has agreed to be in on behalf of UAA as an enthusiastic and articulate spokesperson for Engineering. Volunteers assist in telling the story of UAA to help prospective students realize the options and opportunities available by partnering with and being the bridge from your profession to UAA. In doing so you are helping to build and maintain a pipeline of student success across UAA.

There are still opportunities to speak in support of the UA Budget in Juneau. UA has faced reductions in funding the last several years. Because of this the Board of Regents and President Johnsen have focused on five strategic initiatives for this budget cycle: student success, workforce development, economic development, research and efficiencies. Support for the Regents budget request would be appreciated.

Spring Commencement is Sunday, May 6. Approximately 1300 students will graduate including Alaska Native, Samantha Mack, receiving a Master's degree in English and recently named a Rhodes Scholar. UAA is proud of all of our graduates. Commencement can be watched on GCI.

B. Interim UAA Provost Dr. Duane Hrnrcir: At this time of the year the campus is looking forward wrapping up the academic year, getting through finals and celebrating commencement. Summer will bring with it opportunities for faculty and staff to get away, recharge batteries and work on research before another fall and academic year comes. While administration is looking forward to letting the campus take a deep breath we will also be working on future plans including the FY20 budget. Provost Hrnrcir thanked Advisory Board members for their support noting that advisory boards are important to academic programs, helping to guide curriculum in order to produce the graduates industry needs to hire. Without your input it would be difficult for the university to do that.

C. UAA CoEng Dean Fred Barlow:

Faculty/Students in the News: Assistant Professor Michelle Yatchmeneff, Civil Engineering, has recently won a \$500,000 NSF Early Career Development Award to study Alaska Native student success in STEM fields. This is a very prestigious and challenging national award to win. We are very proud of her success and what she has been able to accomplish.

The College of Engineering's second NSF Research Fellow has been awarded to M.E. student Peter Renner (C.E. student, Nathaniel Cox, was the first).

M.E. student and Olympic cross country skier, Reese Hanneman, came in 14th in the Olympics in Pyeongchang.

Grad student, Euan-Angus MacCleod, was recently highlighted in stories for his work with Professor Tom Ravens on coastal erosion.

College of Engineering faculty have been involved in 4 out of 5 projects which received ConocoPhillips Arctic Science & Engineering research awards this year.

College Happenings: Currently actively immersed in recruitment for new faculty positions, receiving visits from highly qualified candidates for positions in EE, CE, ME, & CSCE.

A celebration of spring graduates, CoEng Alumni Hall of Fame inductees, and Order of the Ring ceremony will be held May 4th from 4 – 6 pm, in the 2nd floor atrium of the Engineering and Industry Building (EIB).

Recruitment: Currently working on dual Process Tech/Engineering Pathway with Kenai Peninsula College which will enable Process Tech graduates to continue on to obtain their Engineering degree if they choose.

The Project Lead the Way (PLTW) articulation agreement with Dimond High allows students to transfer up to 11 credits from Dimond High if they take PLTW courses and also take the right math. This agreement has been extended to all ASD schools. Dimond Engineering Academy graduated its largest class of seniors ever (40) and 25% of them intend to attend UAA with some also planning to attend UAF.

Working to increase the use of strategic scholarships as a recruitment tool including the newly created FIRST Robotics Alumni Scholarship, the Dean's Achievement Scholarship, and our 4-year Dean's Excellence Award by reaching out to students who have expressed interest in UAA to incentivize them to commit. Historically UAA has not used awards in this way, but it is common at other colleges and universities. It is working! Starting to see top students choose UAA and utilize these scholarships. The estate of Harold Wirum made a significant gift to the university which has allowed the college to provide 4 Engineering Dean's Excellence Awards for the fall bringing the total number of these awards currently to 11.

Continuing to work with Thompson and Company to increase marketing including expanding use of social media, adding Instagram to the use of Facebook, improving general media outreach, and

creating several television, print and email opportunities to spread the message that UAA is a great place to be, has great value and approximately 74% of our graduates who are seeking jobs secure positions before they graduate.

2017-2018 Outreach Summary:

- Estimated Total Outreach: 3,500
 - 11.7% - Educators
 - 23.4% - Elementary
 - 23.4% - Middle School
 - 41.5% - High School
- Every tour provides interactivity and highlights programs of study and student clubs.
- Tour Groups Included: Skills USA Participants, Dimond Engineering Academy Students, Rilke Schule Elementary, Gladys Jung Elementary Robotics Team, E-Week Tours, FTC Robotics Students, MathCounts student participants, KidWind Challenge participants.
- Other Areas of Engagement: First Robotics Council, REAP - Kid Wind Project, UAA-Clark Pre-Engineering Academy.

- D. Sr. Development Officer Jayna Combs: Laura Mullin, widow of Adjunct Professor Tony Mullin, is setting up a scholarship in Tony's name. The criteria for the scholarship is still being developed, but the intent is that it will be available to any student in the College of Engineering

The ConocoPhillips Arctic Science and Engineering Award presentations were held March 23 and were a great success. The President of ConocoPhillips and UA President Jim Johnsen both attended. Professors are doing amazing work on all of their projects. It is projected that the fund will have approximately \$475,000 to award during the next round in November. The majority of the projects are either from College of Engineering or teams of College of Engineering professors and students.

The ribbon cutting for the ConocoPhillips Structures Testing Lab is slated to occur in September so there is time to order and install a new dynamic testing actuator funded by ConocoPhillips. This will be a welcome second addition to the actuator already in the lab. There is also new 70 below chamber in the cold regions lab that was funded by Ted Trueblood.

BP is funding the Summer Engineering Academies starting in June again this year as well as funding 9 ANSEP Bridging Students for Bridging 1 (incoming freshman) and Bridging 2 (current students). Many of these students are in engineering. In addition to receiving special help to bridge into college, these students will receive internships at BP.

A request was made that a report be provided to the advisory board at a future meeting on the impact and current status of the recipients of the Engineering Dean's Excellence Awards and scholarships.

- E. Student Representative – Co-Chair of CoEng Student Council: Written report read by the dean. Students have been active this year participating in the National AISC Steel Bridge competition, AISES Rocket Competition, and American Indian Society of Engineering Students National Competition for Rocketry in addition to assisting Vicki Nechodomu with CoEng outreach tours.

- F. Student-Faculty Project Presentation: Dr. Jens Munk, Professor of Electrical Engineering, introduced Ryan Maxwell (E.E), Kyle Todd (E.E), and Hayden Maxell (M.E.) to present their Senior Design Project on Antenna Tracking of a Moving Signal. The purpose of the project was to increase operational range of a drone using directional antennas instead of the typical omnidirectional antennas with three deliverables: Antenna Apparatus Design, Base Station Design with Electronics Selection and Controls System. The final prototype increased the drone range by 3x.
- G. UAF College of Engineering and Mines Dean – Dr. Doug Goering: Dr. Goering thanked the group for collaboration on the work done to advance engineering education in the state of Alaska over the last decade noting that it would have not happened without the cooperative work between the advisory boards, students and faculty at both UAA and UAF. With plans to retire very soon he will continue to serve as dean throughout most of the summer on a part-time basis as the search for a new dean continues. A special thanks was given to Dr. Rob Lang, Associate Dean of Academics, and Dean Barlow for the gift from UAA College of Engineering presented to him recently at the College of Engineering and Mines Awards Banquet on April 6 in Fairbanks which Dr. Lang attended. Advisory Board members thanked Dr. Goering for his service to UAF and to the university and wished him well on future endeavors.
- H. Commendation for Dr. Doug Goering (Addendum 1): Chair Leman presented a commendation honoring Dr. Doug Goering "...for his longtime service to the University of Alaska, particularly during the past decade while serving as UAF College of Engineering and Mines Dean", to the board for approval.

MOTION PASSED: Loren Leman moved to approve a commendation for Dr. Doug Goering. With no objection the motion passed.

4. Old & New Business

- A. Member Updates on Website: Reminder to please send updates to Tami Choquette.
- B. New Member: Chair Leman introduced Lewis Westwick, VP Planning & Commercial Finance, BP Exploration (Alaska) Inc., for membership to the board. Mr. Westwick holds degrees in Chemical Engineering and Petroleum Engineering from Imperial College in London. Having interned with BP he joined the company out of college in the mid-1980's. He worked in Scotland and London before coming to Alaska and has been here for the last 30 years with his wife Linda and their children. Currently in his career he works in business and finance.

MOTION PASSED: Loren Leman moved to approve Lewis Westwick as a new member of the board. With no objection the motion passed.

- C. Transfer of Chairmanship: Several years ago the board held an election where Jenny Jemison was elected vice chair with intent to become chair. Before she could assume the new role as chair, her work with BP took her to Russia. In the interim Loren Leman continued on as chair of the board. With Ms. Jemison's recent return to Alaska the chairmanship of the board can now be officially passed on with her two-year term beginning now. Ms. Jemison commented how happy she is to be home and honored to have the opportunity to serve as chair. She thanked Loren Leman and Richard Reich for their leadership as past chairs. She has already been in conversation with former Chair Leman and Dean Barlow about the future mission of the board. Six years ago the mission of the board was to build the new engineering building. With the joint advocacy of the UAA and UAF advisory boards buildings on both campuses were completed. The mission of the board in the future,

with a continued strategic partnership with UAF, will include advocacy, obtaining funding from the state and other areas yet to be determined. In her term as chair she will work to lead the board in identifying what those areas of impact might be.

5. Committee Reports:

- A. **Membership** – Loren Leman: Current membership with the addition of Lewis Westwick stands at 24. Bylaws allow for 25 members. Ceezar Martinson, who joined the meeting as a guest, has expressed interest in the board and will provide a letter of interest and resume in time for the September meeting.
- B. **Engineering Policy** – Boyd Morgenthaler: Committee Chair Morgenthaler reported that the policy committee has not met since last December. Circulating a document he prepared outlining suggestions for future board actions, he noted that the purpose of the board is to provide guidance and support to the college. Original guidance from the board was for the college to expand programs, which has been accomplished. The question becomes, “What’s next?”. Advocating that the Policy Committee is the body of the board that should take on this task, he welcomed participation on the committee from any members interested in the topic and proposed that the committee meet in the coming months with the goal of identifying a plan for board approval by the December meeting. Several board members expressed enthusiasm. With no objection by the board all members were invited to participate. Meeting times will be identified and communicated to the board.
- C. **Graduate Research – Jon Zufelt**: No meetings have occurred since December.
- D. **Communications** – Melissa Branch: Thanks to everyone who reviewed E-Week Scholarships. Six student scholarships were awarded with the Engineer of the Year award going to a Fire Safety Engineer. SWE is in the process of awarding their scholarships. One of the goals is to facilitate a continuing education scholarship and the society will be working with Jayna Combs and Dean Barlow to establish a scholarship in SWE’s name. ITE has a continuing education scholarship that is available now. Please help spread the word. ASCE Anchorage chapter has started a mentorship program this year where community members mentor and partner with students. High School graduations are coming up at end of May and many societies will present their scholarships to students at that time. The College of Engineering Freshman Orientation is scheduled for August.
- E. **UAA/UAF Joint Council** – Richard Reich: The JEAC annual work plan was completed at the first of the year identifying three objectives: advocacy, outreach, and increasing enrollment. Council Chair Reich will make sure that both advisory boards have a copy.

The council assisted both deans in preparing the annual report for Strategic Pathways Initiative which was submitted in February. The boards should have a copy of that report as well.

JEAC holds monthly meetings, generally the first Friday of the month. Coordination on class schedules and time for UAA/UAF has been a topic at recent meetings, with the council working to identify what it can do to help move that initiative forward. With the upcoming changes in administration at both universities, it was suggested that the council hold an informational and educational meeting with the new Provost and Chancellor at UAA and Provost and Dean at UAF. The intent will be to educate administration on the council’s role, function, and support of both programs. This meeting will likely occur in August and the council will coordinate with the deans to schedule.

The council is also discussing how best to advocate for UA. JEAC sees that the outlook for Alaska is changing and the economy is rebounding. There is a need for continued support of engineering in the state and to counter the idea that projects and the economy are such that the need for engineering has declined. Looking for testimonials from industry to support this advocacy.

6. Announcements and Member Comments:

A. **Next Regular Board Meeting** – September 7, 2018 in EIB 413

B. Member Comments

- a. V. Groeschel – Reminder that the Alumni Hall of Fame inductees include Nicole Knox, Melissa Branch, and Chris Turlettes. Currently volunteering to work with the UAA Robotics Team as a project manager. The team missed the cutoff to participate in the national competition by two points. However, will attempt to participate in a Canadian equivalent competition in August. The Alumni Chapter wishes to express their appreciation to the dean's office for their continued support. National Robotics Week Celebration and E-week student tours were a great success with more than 150 students participating. Special thanks was given to Vicki Nechodomu for her work over the week.
- b. B. Morgenthaler - Suggested to add a formal K-12 Outreach Committee to the board. A recent article in the Imprimis Newsletter about China indicated that 40% of students in Chinese universities are in engineering. In the US the number is closer to 8%. The world is being built by engineers. If the US is not producing engineers the rest of the world will. There is no practical limit to what engineers can do.
- c. L. Leman – Expressed thanks for the opportunity to serve and chair and thanks to UAA for making the Professional Development Seminars available. Board members are encourage to volunteer to present in the future.

7. Meeting Adjournment

Chair Jemison adjourned the meeting at 9:40 a.m.