University of Alaska Academic Structure Change Management

Focus: Engineering

Session Notes, August 2019

<u>First Session (Fairbanks and on-line)</u>

Overall Session Goals:

- In a focused, systematic way, address changes being advanced by the University of Alaska Board of Regents in response to the current financial crisis and in service of the long-term vision for the university.
- Surface and address conflicting interests; identify and advance common interests.
- Generate constructive options and, to the extent possible, consensus recommendations.

Overall Note:

- This document is the product of brainstorming and dialogue. It is designed to be generative not definitive – as a way of providing broader input into the responses to the Board of Regents that might have happened otherwise. It does include options and some consensus recommendations, all of which need to be understood as the inputs of a diverse set of participants, but not the final word on any of these issues.

Welcome:

- Thank you all for joining in this dialogue on engineering in the University of Alaska
- This is the first of two meetings
- This session is in response to the board's directive to look at the consolidation of the system and consideration for single accreditation
- Even though the new compact is better than things were, there are still unprecedented budget cuts of over $20 million a year for three years
- This is chance to look at ways to be collaborative across the system and surface ideas on how to move forward
- Think of this as the beginning of ways to move forward
- The goal is to help advise the board

First Alaskans Institute Agreements:

- In Every Chair, a Leader
- Speak to be Understood; Listen to Understand
- Be Present; Be Engaged
- Value Our Time Together
- Safe Space for Meaningful Conversation
- Challenges → Solutions
- Takest Thou Hats Off
- Our Value of Humor Helps Us
- We are Responsible for Our Experience
- Take Care of Yourself; Take Care of Each Other

Additional Proposed Groundrules:

- Focus on interest and options – avoid jumping to positions.
- Be hard on the issues, not each other.
- Operate with transparency – notes will be recorded live on a cloud-based, shared document.
- Be mindful of the time available in each session; issues that can't be resolved during the session will be placed on a "parking lot" in the notes.

- Limit electronics during the session to what supports the session; observers may communicate (in person or electronically) with participants with whom they have connections before and after the sessions, but should only serve as observers during the sessions.

Change Management Model:

Phase 1: Hopes & Fears (30 min.)
Phase 2: Vision & Data (30 min.)
Phase 3: Stakeholders & Interests (45 min.)
Phase 4: Alignment & Options (45 min. + Session 2)
Phase 5: Recommendations & Implementation (30 + Session 2)

Phase 1a: Hopes

- The whole is greater than the sum of the parts – by combining forces we deliver better programs and research opportunities
- Higher quality programs educationally, bringing more students to Alaska
- We will increase classroom options for students – more classes available so they can graduate on time
- Take the time to make data-driven, evidence-based decisions to grow engineering
- While working collegially with UAA to develop a new, modern, streamlined, efficient, attractive curricula – something attractive to new students
- New on-line programs, such as serving military students and rural Alaskans
- A stronger engineering school as a product of these conversations
- We can better leverage distance technology that we already have
- More nimble and agile in response to opportunities
- Can graduate enough engineers to meet the needs in the State of Alaska

Phase 1b: Fears

- New barriers will be thrown up impairing student success
- Quality and existing ways of operating now will be lost in the process
- Combining programs might limit opportunities for student competitions
    - Only one steel bridge team, for example
- Combining two colleges together might undercut some small and very critical programs, such as programs with petroleum engineering, mining, geological engineering, project management, geomatics – all unique in the state and critical
- This feels as though it is an agenda-driven decision and it is being done in a very short time – resulting in lower quality decisions
    - We should be looking at many ideas
    - Recognize the board's duty of care, with evidence and data
    - This is a huge decision with broad ramifications
- Losing our identity as a research university, which includes the ability to deliver the curriculum with hand-on learning
    - Worry about relying more on distance courses that diminishes the students' experience
- A fear that one campus would end up in the lead, at the expense of the other
- A concern about job security
- A fear of losing ABET, NWCCU, and PMI accreditation

Phase 2a: Potential Elements of a Future Success Vision – 2025

- More students, faculty and staff at a place that everyone wants to come, local, national, and international
- High school students to see us as their preferred option rather than out of state for engineering and computer science because of our quality and hand-on intensive programs

- One size does not fit all – serving different student populations with different needs – responsive to local communities and needs
    - Example of working professionals in Anchorage going back to school – with different advising, scheduling, and other needs
- Closer ties with community and industry to better meet demand
    - Building on what has been happening for years
    - With more opportunities – attract more students from Anchorage to the unique programs in Fairbanks (and vice versa)
    - Find new opportunities for support of students
- Building out the new technology sector
- Integrated arctic engineering program – electrical, structural, etc.
    - Example of current conference on polar engineering
- Don't have to go through this kind of a soul-searching process every year
- We have developed a modern shared curriculum that maintains our hand-on approach
- Energetic, visionary, and positive
- Integrated student teams that are nationally competitive – accomplishing together what students on separate campuses can't
- Programs driven by state demands, reflecting resource extraction industries of the state
- Programs are more interdisciplinary and modern, using and exploring new technologies
- An environment that is appreciative of the value we have. All work hard and that is not fully appreciated now
- A focus on the needs of students is reflected in how a combined unit operates
    - A comment from a student that the dean should be in Anchorage, which has the larger student population (the president and administration is in Fairbanks, which is far removed)
    - Counterpoint comment that the Ph.D. program and founding of engineering is in Fairbanks, which would be an argument for the dean to be in Fairbanks
    - An elephant in the room in this process that might keep us from being open minded on the process
    - There are also issues on shared services, advancement, etc.
    - Is there an option other than lead campus and a satellite campus, resulting in marginalization
    - Will it be 1 + 1 being 3 or 1 + 1 being 1 and ½
    - No one wants to be the marginalized campus
    - Industry is clear that it needs engineering delivered both in Anchorage and Fairbanks
    - Both can benefit from a merged program
    - We fail if the result is either program being weaker as a result of a consolidation
    - Aim is two strong collaborating engineering locations/programs

Phase 2b: Relevant and <u>Available</u> Data

- There is some data easily available
    - Student credit hours
    - Organizational chart
    - US DoL demand data
- There have been a few meetings already with data collected on a google drive
- There has been rhetoric around this being in the context of the budget and there is a need to address this
- Looking at the data in terms of workloads is a challenge in that there are apples and oranges in how things are defined in different locations
- True cost is important – consolidation can add costs in bridging geography, for example, and some things do need to be in more than one location

    - Some costs may go up, such as in doing distance learning well
- The data should be open, publicly available
    - ABET mandates public data that is on our websites
- The data needs to be accurate
    - The demand for ME students is listed inaccurately, for example
    - Enrollment data requires caution – petroleum engineering enrollments, for example, reflects the price of oil
- What can be learned from other universities operating on the combined model – what data is available
    - Example of Penn State
    - There are examples of separate accreditation, but with enhanced collaboration – such as the University of Washington
- What is the current priority given reduced budget cuts?
    - How have the priorities been redistributed?
    - What are the priorities for Engineering in this changed circumstance as compared to when it was $135 million? What is the cut we will have to absorb?
        - Engineering has been part of the university since its founding
        - Will it be a target for growth, drawing investment for example?
        - Issue of engineering being in the initial presentations on this so it is in people's minds – it was a rhetorical approach but it was noted within engineering
- There ought to be a general shared understanding of the data to be presented, taking into account the overwhelming amount of data that is there
    - No interest in invasive comparisons between UAA and UAF
- Many of us have Ph.D. in using data to tell stories
    - We understand the need to be cautious
    - But we also see the need to go forward with data

Phase 3: Stakeholders & Interests

Stakeholders	Interests
All stakeholders (shared interests)	• Good stewardship of the resources entrusted to us • Good local advice on unique Alaskan problems
Undergraduate students	• Access to faculty • In person and online courses • Accreditation • Job opportunities and internships • Hands on learning • Competitive tuition • Stability of the future of the engineering program • Student competition opportunities • Campus pride • Longevity and stability of professors
Graduate students	• Access to faculty • In person and online courses • Accreditation • World class research • Funding opportunities/ grants • TA/RA positions • Campus pride • Longevity and stability of professors • Recognition

	• Flexibility to work and pursue degree
Faculty	• Stability • Promotions • Career development • Career progress (tenure and promotion) • Accreditation • Funding opportunities • Campus pride • Opportunities for family members • Recognition
Staff	• Job security/stability • Promotions, opportunities for professional development • Campus pride • Opportunities for family members
Communities	• Path for career development for local citizens • Community events (public speakers, arts events) • Retain university as a local economic driver: employees, local contractors, visitors, conferences • Sharing and distributing place-based knowledge (e.g., Cooperative Extension Services, Earthquake Center, Climate research) • Conferences that feature value of Alaska and University
Employers/ industry	• Qualified employees, in sufficient quantity • Training for existing employees, like workshops • Interns: low price labor, can train in their corporate culture
Research centers and institutes	• Retain faculty who are strong in research • Attract strong graduate students, post docs • Obtain grant funding by fiscal support, grantwriting staff, and local expertise. • Create/codify place-based knowledge
Families	• High quality education for family members who need it • Keep family members where they have roots (as students, as employees) • Pre-college outreach activities
Alaska Native Corporations	• Collaboration, working with ANSEP • High quality grads to hire (similar to other employers) • Scholarships for shareholders
Board of Regents	• Good stewardship of resources • Access to quality education and student success • Reputation of institution(s) • Accreditation
Board of Directors (Governing Board of the UA Foundation)	• Good stewardship of donated funds • Insuring donor intent • Reputation of the university • Building endowment
Legislature	• Strong university/universities • Cost-efficient university • Frankly the legislature seems a bit divided
Alumni	• Reputation = value of degrees • Connection with program • Having a job

	• Young alumni - internships and jobs; mid and late-career alumni looking for employees and collaborations (including through research and testing) • Continuing ed opportunities • Connection - pride in your home program, the place you graduated from
Donors	• Faith in the college • Trust that we are delivering what they are supporting, whether for scholarships or funding for grad research, labs/equipment • Enhancing their own reputation in the local community
Accrediting bodies (NWCCU, ABET, PMI)	• Deliver high quality programs. • Maintain sufficient faculty breadth, depth, professional currency. • Maintain modern, quality laboratory facilities, with sufficient technical and financial support. • Best practices
Funding Agencies (e.g., NSF)	• Don't lose ability to conduct quality research, need university research infrastructure, including technicians, research business office and management. • Maintain high quality research facilities.
K-12 Schools (teachers, administrators)	• Promote all programs at both locations. • Maintain programs that can be truthfully recommended to students. • Interactions with K-12 teachers is important.
K-12 Students (future university students)	• Students can remain local to receive quality engineering and CS education, or seamlessly transfer between campuses, or stay in-state to receive education in the "small/unique" programs.
Professional Associations	• Professional development (ongoing) • Affiliation with university
Student Clubs	• Have availability of student activities/competitions at all campuses. • Locations to hold meetings, and enough student body to make the meetings vibrant and interesting.
Advisory Boards	• Alignment of programs to industry needs
Governor	• Realization of the need/value of engineering education to the State of Alaska.
Professional Licensing Boards	• Offer courses needed for licensure
Municipalities (Anchorage, Fairbanks, Community campus locations)	• Access to local educational opportunities for their citizens • Campus as a community gathering place/public square • Development of local development initiatives
Athletics	• Compliance with NCAA regulations • Engagement of sports fans (students, alums, families, etc.) • Opportunities for athletes

Phase 4a: Alignment

Points of Alignment:

- These stakeholders and constituents have alignment about the overarching Engineering program objectives that are rooted in the vision/mission
- All need good stewardship of the resources with which we have been entrusted
- Alignment around service to the students
    - Administration exists to serve the faculty, who in turn serve the students
- Alignment about the importance of engineering research
- Alignment around service to the state
- Alignment around each location helping to lift up both teaching and research in the other – driven by interest

Points of Misalignment:

- Contrasting views among stakeholders on the relative balance among teaching, research, and service priorities
    - Issues around equitable workloads going forward
- Contrasting views of mission – open access pride in Anchorage; research pride in Fairbanks (even if each has interest in the other, the balances are different)
- A potential misalignment if this ends up pointing to one group of teaching faculty and one group of research faculty
- Smaller programs have faculty who would like to be more research productive, but have to cover the courses
- A potential broader misalignment between engineering that potential overall direction of change around class sizes increasing in ways that would cut interactions with faculty and project-based learning
    - Note that these student faculty ratio issues have not been focused on engineering specifically
- A tension around identities and not stereotyping either campus, there are faculty in both with passion that doesn't match the stereotypes
    - People should be able to focus on what they are good at
- A potential disconnect if either campus were to end up with fewer faculty
- Contact time per credit hour (60 min. versus 50 min.) differences, as well as course-block start times (M/W and T/TH versus M/W/F and T/TH) as a structural misalignment
- Mechanical engineering has a great deal of overlap, but there are differences in contact time per week that relate to the rigor of the program
    - Issues of asking people to work less or to work more – a concern that the result could be a lowering of standards which would not be a good outcome if the aim is to attract people from elsewhere

Phase 4b: Options

(Note: These are options (a product of brainstorming) meant to be thought starters, not formal recommendations. They can be built on, through consultation and planning, as inputs into ways forward that improve collaboration, efficiency, and effectiveness in a resource constrained historical moment, as well as potentially servings as a foundation for the future.)

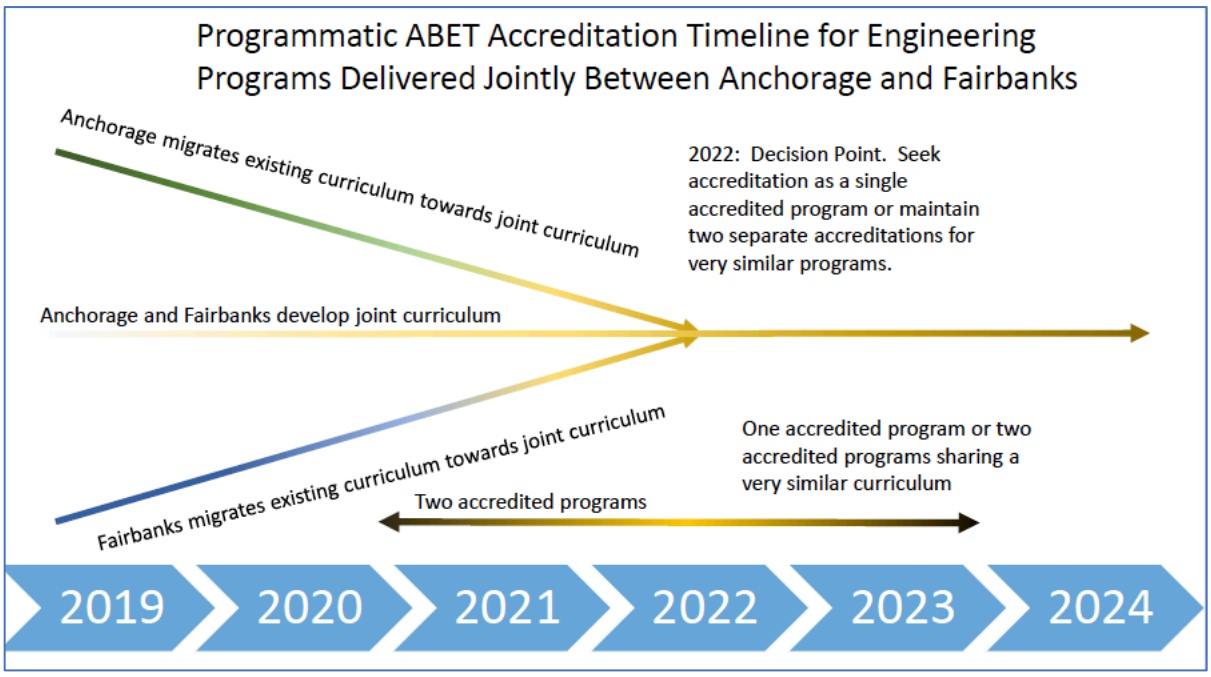
- The concept of a "flying dean" who alternates among locations
    - The model is in use now where courses alternate between Anchorage and Fairbanks each week
- Another options is the "alternating dean" option
- There is the option of "co-deans"
- The broader option is to not locate decision making in only one location
- There is the idea of two separate colleges with enhanced collaboration

- Whether or not there is a merger, there should be a full assessment of student needs and investments in distance learning to do it right
- One college with two schools, with each campus being the lead on particular programs (example, one civil, one mechanical, and so on with balance)
    - With separately accredited programs (one campus as the lead the is accredited and then programing available to both)
    - Or two separately accredited programs
- Newly developed, harmonized curricula for mechanical, electrical, civil, and computer science that is shared between both locations
    - Co-developed, shared, and with single accreditation, with the time taken to implement

Second Session (Anchorage and on-line):

Options (cont.)

(Note: These are options (a product of brainstorming) meant to be thought starters, not formal recommendations. They can be built on, through consultation and planning, as inputs into ways forward that improve collaboration, efficiency, and effectiveness in a resource constrained historical moment, as well as potentially servings as a foundation for the future.)



Discussion:

- Engineering needs to be delivered in Anchorage and Fairbanks
    - Students want this as does industry
    - Some programs are identical in both locations, such as computer science, computer engineering, etc. and there needs to be sharing across locations
        - A shared curriculum
    - Coordinating accreditation is really important, where the dean sits is less so
    - Some of location specific
    - Standard is what is the best interest of the state, the communities, the students, and others – aim is 1 + 1 = 3 (not 1 + 1 = 1/2)
- 2023 horizon reflects what ABET is saying – for the timing needed before the next general review
    - Would also allow for full engagement with faculty, staff, and students
    - Anchorage has a 2022 review scheduled and ABET has agreed to a one-year permanent extension so all site visits are aligned
    - We are proposing that you trust us to do it right – it is not saying either way on the merger – it is driven by the students
    - Begin with what we are trying to accomplish and that let the structure follow – form follows function
- There are real opportunities for benefits for students
- There are parts of this that will take time – harmonization within courses and other matters
    - Issue of PEOs to compare first (program educational objectives), performance indicators, etc.

- There is a risk such as what happened with the Schools of Ed, where students were lost in the process of consolidation
    - There is a need to fully understand the wishes of the students, which mitigates the risk of losing students in the process
- The timeline actually began with Strategic Pathways in the case of the ME program
    - Appreciation for the alignment already happening with people talking to each other
- There harmonization can happen more quickly than the ABET review, but that is a key milestone
    - Some cost savings can be achieved sooner
- The cost savings are achieved when each program can count on delivery from either location to maintain accreditation
    - Actually using this to be resilient
- Comment that there is an argument for merging the deans' offices before harmonizing the curriculum as a response to the Board – if this is what is demanded
    - It will "suck" either way – doing it early or later
    - Also a note that there is <u>not</u> a promise being made of merging the deans' offices
    - This is a promise to really engage the cost issues and do what makes sense on the structure
    - There is a track record of UAA and UAF engineering working together and delivering results
- A commitment to keep the students foremost in this process
- A struggle how to reconcile the short term cost pressures and the generative dialogue around the engineering approach
- This doesn't mean that we don't get a budget cut, but that we operate with a plan and a direction

Phase 5a: Potential Consensus Recommendations

- ***Consensus:*** Begin the process of integrating curriculum on common courses – with all the parts of the process co-developed – a process of harmonization
    - A need to work out the structural issues on course blocks and time per credit hour, for example
    - A commitment for the structure to follow
    - Alignment with ABET review calendar
- ***Consensus:*** Ensure that common language is used in the process (common courses, not duplication), harmonization, a binary star system
    - An important point for all the groups that are in this process
- ***Consensus:*** This smaller committee can identify things to look at with respect to cost cutting and involve a broader group within Engineering in both locations – a commitment by both dean's offices to work together in this process – with dual aim of increasing enrollment/revenue and long-term cost savings
    - Short term cost savings are understood, but a commitment to a longer term process that is thoughtful and designed to be successful

Phase 5b: Implementation Planning

- **What:**
    - (recommendation)
- **Who:**
    - (listing of stakeholders relevant to the recommendation)
- **When:**
    - (milestones with timing)
- **Where:**

    - (any specific locational considerations)
- **Why:**
    - (the crisp 1 sentence elevator speech on "why change")
- **How:**
    - (tools, methods, and other mechanisms to be utilized)

Concluding comments and dialogue:

- There will be process recommendations going to the Board
- The need to reduce the budget is more immediate
    - There is a risk to smaller enrollment programs, which is an issue for specialized engineering programs – these don't want to be lost in the process due to decisions based on enrollment
    - Can there be an approach the takes into account the timing?
- There is also the potential to grow resources
    - Example of doubling engineers in the state in response to the Board
- This really about reducing dependence on state GF support and growing capability
- A need for immediate, mid-range, and long-term steps
- There will be engagement with faculty governance, students, advisory boards, and others

Appendix:

All Session Overview:

- ***Fairbanks (part I sessions)***
  - Monday, August 19th
    - Health … Science/Arts/Humanities
  - Tuesday, August 20th
    - Management and Business … Research … Engineering
  - Wednesday, August 21st
    - Education … eLearning … CTE / Community Campuses
- ***Anchorage (part II sessions)***
  - Thursday, August 22nd
    - Health … Management and Business … Research … Engineering
  - Friday, August 23rd
    - Education … eLearning … CTE / Community Campuses … Science/Arts/Humanities