



March 24, 2008

To: Dr. Dan Julius, Vice President Academic Affairs and Research
UA Systemwide Academic Council

From: Robbie Stell, UAS Provost

Subject: New UAS Programs

The UAS Schools of Education and Arts & Sciences have developed two new programs provided for your review.

The M.Ed. in Educational Leadership, offered by the School of Education, will enable UAS to continue to serve school districts in Southeast Alaska and in rural and remote regions of the state. This program was developed in response to requests from the Alaska Department of Education and Early Development (DEED), and school districts for a program with this emphasis, and is the result of a collaborative effort by the School of Education, School of Management, DEED, and Alaska school districts.

The Certificate in Pre-Engineering, offered by the School of Arts & Sciences, will provide opportunities for UAS students to prepare academically for successful transfer to the UAA BSE engineering program; additional transfer agreements are being developed to provide transfer opportunities to each of the engineering programs at UAA and UAF. This certificate directly supports the UA system goal of doubling the number of BS Engineering graduates within the state.

These programs have been approved through the normal UAS governance process. We are now asking for SAC review. UAS proposes that these proposals be submitted to the Board of Regents for consideration at the April 2008 meeting.

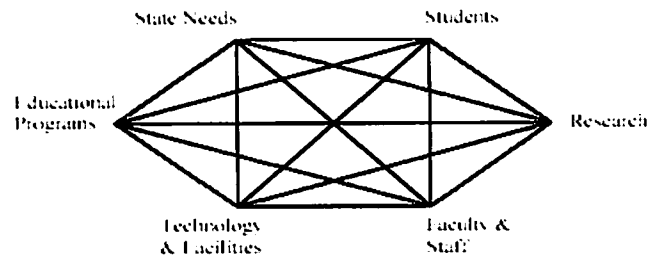
University of Alaska Board of Regents

Program Approval Summary Form

MAU: University of Alaska Southeast

Title: Certificate in Pre-Engineering

Target admission date: Fall 2008



How does the program relate to the Education mission of the University of Alaska and the MAU?

The Certificate in Pre-Engineering (CPE) supports the admission, advising, retention, and transfer of UAS undergraduates for the Bachelors of Science in Engineering (BSE) program with options for computer, mechanical or electrical engineering. The certificate prepares students academically to transfer to the UAA BSE program; additional transfer agreements are being developed for each of the engineering programs at UAA and UAF.

The CPE supports the UA and UAS missions to inspire learning and student achievement through teaching of and access to high-quality academic programs. The CPE supports the UA and UAS strategic plan goals for student success, educational quality and responsiveness to State needs. The certificate directly supports the UA system goal of doubling the number of BS Engineering graduates within the State by 2012/2013. The CPE program supports UAS' community college mission to provide excellent academic preparation for transfer and admission to high-demand degree programs.

What State Needs are met by this program?

The Certificate in Pre-Engineering supports the State need for undergraduate preparation aligned to support the UA system goal of doubling the number of high-demand graduates in engineering. This program has been planned and cooperatively developed as a part of the UA engineering initiative to respond to the documented workforce needs of industry and agency employers for additional qualified engineers in Alaska.

What are the Student opportunities and outcomes? Enrollment projections?

Student Opportunities and Outcomes

The Certificate in Pre-Engineering provides opportunities for UAS students to prepare academically for successful transfer to the UAA BSE program. Additional transfer agreements are in development and will provide transfer opportunities into the engineering programs at UAA and UAF. UAS' Pre-Engineering Advisory Committee strongly supports hiring Alaskan engineering graduates. Students graduating with an engineering degree from UAA or UAF will be heavily recruited for job opportunities within the Southeast region. The CPE will catalyze outreach and recruitment strategies to increase student opportunities in science, technology, engineering and math (STEM).

Academic partnerships with regional high schools offer opportunities for dual-enrollment and tech-prep studies encouraging students to pursue pre-engineering studies and careers in engineering.

Enrollment projections for this new certificate are anticipated to be modest in the initial years with expected growth as the program becomes established in the region. An initial admission of 3-5 students is anticipated with an annual average admission goal of 8 Full-Time Equivalent (FTE) students, with 5 full time (12-15 credits/year) and 6 part-time (.5 FTE; 6-9 credits per semester) students admitted per year. Total enrollment of majors per semester is projected to hit a steady-state of 17 by AY12, this number remaining relatively steady as students complete the Certificate and/or transfer to programs at UAA, UAF, or outside of Alaska.

Describe Research opportunities:

The UA Transportation Research Center (AUTC) will provide new and expanded opportunities for statewide collaborations for UAS faculty and students. Existing partnerships could be expanded for applied research with the UAS Environmental Technology program and the Alaska Training/Technical Assistance Center (ATTAC) at UAS Sitka. ATTAC funds applied research on issues relating to rural water supply and treatment conducted by the engineering programs at UAA and UAF. UAS Construction Technology has an ongoing applied research partnership with the Cold Climate Housing Research Center (CCHRC). CCHRC is an industry based, non-profit corporation created to facilitate the development, use, and testing of energy efficient cost effective building technologies for Alaska and the world's cold climate regions.

Describe Fiscal Plan for development and implementation:

UAS has added faculty workload (1.3 FTE) and staff advising time (.25 FTE) for program teaching, advising, coordination, recruitment and outreach. Program faculty resources focus on: coordinating curriculum with the Schools of Engineering at UAA and UAF; identification of students already at UAS seeking pre-engineering preparation; developing regional career awareness of engineering educational opportunities; UA/UAS recruitment for engineering programs; and industry partnerships for program support.

The Certificate of Pre-Engineering will add the courses ENGR S151 Engineering Practices I and ENGR S161 Engineering Practices II courses to the Juneau campus instructional program. This coursework will require the addition of MATLAB software licenses to the existing UAS computer laboratories on the Juneau campus; licensing and installation will be in place by fall 2008. The cost of this additional software will be supported by the Pre-Engineering initiative funding and computer laboratory/technology fees.

