Board of Regents Program Action Request
University of Alaska
Proposal to Add, Change, or Delete a Program of Study
(University Regulation R10.04.020)

1a. Major Academic Unit (choose one) **UAF**	1b. School or College **CRCD/TVC**	1c. Department **Construction Management & Drafting**

2. Complete Program Title **Drafting Technology A.A.S**

3. Type of Program

☐ Undergraduate Certificate ☒ AA/AAS ☐ Baccalaureate ☐ Post-Baccalaureate Certificate

☐ Masters ☐ Graduate Certificate ☐ Doctorate

4. Type of Action	5. Implementation date (semester, year)
☒ Add ☐ Change ☐ Delete	Fall 2010

6. Projected Revenue and Expenditure Summary. Not Required if the requested action is deletion.
(Provide information for the 5th year after program or program change approval if a baccalaureate or doctoral degree program; for the 3rd year after program approval if a master's or associate degree program; and for the 2nd year after program approval if a graduate or undergraduate certificate. If information is provided for another year, specify (1st) and explain in the program summary attached).

Projected Annual Revenues in FY13		Projected Annual Expenditures in FY13	
Unrestricted		Salaries & benefits (faculty and staff)	$114,000
General Fund	$	Other (commodities, services, etc.)	$ 30,000
Student Tuition & Fees	$200,250	TOTAL EXPENDITURES	$144,000
Indirect Cost Recovery	$	One-time Expenditures to Initiate Program (if >$250,000)	
TVEP or Other (specify):	$	(These are costs in addition to the annual costs, above.)	
Restricted		Year 1	$
Federal Receipts	$	Year 2	$
TVEP or Other (specify):	$	Year 3	$
TOTAL REVENUES	$	Year 4	$

Page # of attached summary where the budget is discussed, including initial phase-in: Page 2

7. Budget Status. Items a., b., and c. indicate the source(s) of the General Fund revenue specified in item 6. If any grants or contracts will supply revenue needed by the program, indicate amount anticipated and expiration date, if applicable.

Revenue source	Continuing	One-time
a. In current legislative budget request	$	$
b. Additional appropriation required	$	$
c. Funded through internal MAU redistribution:	$	$
d. Funded all or in part by external funds, expiration date	$	$
e. Other funding source Specify Type:	$	$

8. Projected enrollments (headcount of majors). If this is a program deletion request, project the enrollments as the program is phased out.

Year 1: 15	Year 2: 20	Year 3: 25	Year 4: 25

Page number of attached summary where demand for this program is discussed: Pages 1, 2

9. Number* of new TA or faculty hires anticipated (or number of positions eliminated if a program deletion):

Graduate TA	NA
Adjunct	2
Term	0
Tenure track	0

10. Number* of TAs or faculty to be reassigned:

Graduate TA	NA
Adjunct	0
Term	0
Tenure track	0

Former assignment of any reassigned faculty:
For more information see page 2 of the attached summary.

11. Other programs affected by the proposed action (please list):

Program Affected	Anticipated Effect	Program Affected	Anticipated Effect
Construction Management	Increased course enrollments		

Page number of attached summary where effects on other programs are discussed: See Page 2

12. Specialized accreditation or other external program certification to needed or anticipated. List all that apply or 'none': None

13. Aligns with University or campus mission, goals, and objectives (list): Tanana Valley Campus Strategic Plan, UA Education Mission, UAF Education Mission

Page in attached summary where alignment is discussed: Page 1

14. State needs met by this program (list):

Workforce Development

Page in the attached summary where the state needs to be met are discussed: Page 1

15. Program is initially planned to be:

☒ Available to students attending classes at UAF campus(es).
☐ Available to distance students.

☐ Partially available to distance students.
(More than one box may be checked if applicable.)

Page # in attached summary where distance delivery is discussed: N/A

Submitted by University of Alaska Fairbanks with the concurrence of its Faculty Senate.

Authorized MAU Signature / Date: 4/19/2010

☐ Approved
☐ Disapproved
Chair, Academic and Student Affairs Committee / Date

☐ Approved
☐ Disapproved
Chair, Board of Regents / Date

*Net FTE (full-time equivalents). For example, if a faculty member will be reassigned from another program, but their original program will hire a replacement, there is one net new faculty member. Use fractions if appropriate. Graduate TAs are normally 0.5 FTE. The numbers should be consistent with the revenue/expenditure information provided.

Attachments: ☒ Summary of Degree or Certificate Program Proposal.
☒ Other (optional) Industry Letters if Support

Associate of Applied Science in Drafting Technology
Proposal Summary

Overview

This program is proposed by the Construction Management and Drafting Technology programs at the Tanana Valley Campus within the College of Rural and Community Development. It has been promoted by the Community Advisory Committee of the Drafting Technology program made up of industry professionals, existing and former students who need additional education before becoming workplace ready, and potential employers within the community.

The creation of an Associate of Applied Science program in Construction Management at UAF in 2006 has provided the Drafting Technology program an opportunity to offer much needed additional training to students in the area of construction with a minimal outlay in resources or additional courses. Similar to the Architectural and Engineering Program in Anchorage, the A.A.S. in Drafting Technology would utilize courses taught in Construction Management to bolster the existing Certificate into an A.A.S.

No impact to existing programs across the UA system is expected. The DRT Program in Fairbanks serves a population grounded to the community by work and/or responsibilities. Course offerings are typically in the evenings, allowing students who would otherwise be unable to pursue the degree to do so while meeting other responsibilities.

State Needs Addressed

According to the Alaska Department of Labor Statistics, there will be a 19.6% increase in drafters employed between 2006 and 2016, exceeding the projected state average employment growth rate of 14%.

The Army Corp of Engineers, a principal source of local construction work, is requiring the use of Building Information Modeling (BIM) on their projects. BIM, a three-dimensional software platform, can be used by designers, contractors, and owners, increasing the need for well-trained drafting technicians that can navigate the software.

Program Demand

Feedback from the Drafting Technology Community Advisory Committee, made up of local professionals and potential employers, has consistently supported a program with greater emphasis on technical training in building technologies in order for students to know how to use the skills in computer aided drafting they learn in the existing Certificate program. The proposed AAS meets this need with no additional commitment of resources. Graduating students will leave the program with the vocabulary and knowledge needed to converse with engineers, architects, and contractors -- skills needed to seek and retain employment.

The Department of Labor Occupational Outlook Handbook for 2008-2009 clearly states "Opportunities should be best for individuals with at least 2 years of postsecondary training in a drafting program that provides strong technical skills and considerable experience with CADD systems." The report goes on to highlight the increasing need for drafters due to increasing retirement and complexity of drafting software.

Associate of Applied Science in Drafting Technology
Proposal Summary

The experience of current Drafting Technology Certificate holders strongly reinforces the DOL findings. Most graduates of the program have had difficulty finding or keeping work, primarily because they have little to no knowledge of construction technology. By comparison, students who have construction experience are more likely to find and keep employment. Unfortunately, those few students are the exception. This proposed AAS will remedy this issue providing students with no construction knowledge with a broad exposure to the construction industry.

Currently, there are 20-25 students in the Drafting Technology program. There are 15 students currently enrolled with the Drafting Technology certificate declared as their primary or secondary major. Of these, 12 list the certificate as their primary program. An additional 5-10 students are enrolled in drafting courses who have not yet declared a major but have expressed intent to pursue the drafting certificate. Preceding semesters have seen enrollment as high as 34 students. Degrees received by Drafting Technology students have seen an upward trend, from no degrees rewarded in 2000 to eighteen in 2008. Given the upward trend in enrollment and graduation, enrollments are expected to be between 25 and 35 students annually.

Program Budget

We do not seek or need any additional funding in order to develop, implement, or maintain this program. With the exception of two courses, all courses already exist and are taught on a routine basis. The two new proposed courses, Structural Drafting and Mechanical and Electrical Drafting, are expected to be taught by adjunct faculty currently working in the industry. The funding for the adjunct faculty will derive from the tuition paid for the course. Administrative support and facilities are all in place and active in supporting the existing Certificate program. If enrollment increases as projected, the program as it now exists has sufficient flexibility to provide the equipment, facilities, and administrative support with no additional costs. Classrooms and equipment currently exist and are used primarily for evening classes 3-4 times weekly. Both could easily be utilized for additional classes with no need for additional space or equipment.

Effects on Other Programs

Additional enrollment in A.A.S. required general education courses is expected. Across the system this quantity will be minimal. Enrollment in Construction Management courses are expected to increase but are projected to remain within the current enrollment limits. Effects elsewhere are not expected.

Faculty

New faculty needs created by this A.A.S. are expected to be minimal. With the exception of two courses, all courses are already offered. The two new courses will be taught by Adjunct Faculty, and self-funded through tuition. Adjunct Faculty are especially suited to teach the two new courses, as they are both discipline specific drafting courses that will benefit from the real world experience Adjunct Faculty actively involved in the profession will bring to the courses.

The goals of this A.A.S. program are to:

- Provide a well-rounded exposure of construction technology to students in order that they can effectively communicate with architects, engineers, and contractors.
- Provide focused education and skill development in drafting in order that students enter the workforce with a readily marketable skill.
- Meet the local demands for draftspersons that possess a basic knowledge of construction, accurate and efficient drafting skills, and the flexibility to utilize evolving drafting and design technologies.

Proposed Catalog Layout:

Drafting Technology: Associate of Applied Science

College of Rural and Community Development
Tanana Valley Campus
(907) 455-2845
www.tvc.uaf.edu/programs/drafting/

Minimum credits for the A.A.S.: 60

The A.A.S. degree in drafting technology combines focused training in computer aided drafting with a well-rounded exposure to the professions, trades, and materials common to construction in Alaska. Courses combine technical CAD training with the vocabulary and knowledge needed to communicate with future employers in the architectural, engineering, and construction fields. Students develop skills in mathematics, drawing and multi-functional CAD techniques. Students are instructed in traditional drawing techniques, computer-aided drafting (CAD), and building information modeling (BIM) technologies; giving them the knowledge and flexibility to work traditionally and with the most recent drafting technologies. Required courses cover many aspects of design and construction, including building materials, codes and civil, mechanical, electrical, and structural technologies. Qualified students have the opportunity to work side-by-side with professionals from the architectural and engineering community in internship situations, gaining valuable on-the-job experience.

Major – A.A.S. Degree

1. Complete the general university requirements
2. Complete the A.A.S. requirements (15 credits)

Communications
ENGL 111X – Introduction to Academic Writing.....3
ENGL 213X – Academic Writing about the Social and
Natural Sciences
or ENGL 211X Academic Writing about Literature.....3
COMM 131X - Fundamentals of communication: group context

or COMM 141X – Fundamentals of communication : public context 3
Computation
DEVM 105 – Intermediate Algebra
or TTCH 131 – Math for the Trades
or MATH at the 100 level or higher 3
Human Relations
ANTH/SOC 100x – Individual, Society, and Culture
or ABUS 154 – Human Relations
or approved human relations course 3

3. Complete the following major requirements (42 credits)
DRT 101 – Introduction to Drafting 3
DRT 140 – Architectural Drafting 3
DRT 150 – Civil Drafting 3
DRT 170 – Beginning CAD 3
DRT 210 – Intermediate CAD 3
DRT 270 – Advanced CAD 3
DRT 145 – Structural Drafting 3
DRT 155 – Mechanical and Electrical Drafting 3
CM 102 – Means and Methods of Building Construction 3
CM 123 – Codes and Standards 3
CM 142 – Mechanical and Electrical Technology 4
CM 213 – Civil Technology 4
CM 231 – Structural Technology 4

4. Select <u>one</u> of the following electives (3 – 6 credits)
DRT 160 – Drafting Internship 3-6
DRT 121 –Construction Documents and Drawings 3
CM 201 – Construction Project Management 3
ES 101* – Introduction to Engineering 3

5. Required credits 60-63

* *This elective requires additional math prerequisites.*

RESOURCE COMMITMENT TO THE PROPOSED DEGREE PROGRAM

Resources	Existing	New		Total
	College/School	College/School	Others (Specify)	
Regular Faculty (FTE's & dollars)	FTE .70 ($57,000 + 40% benefits) $55,860	0	0	FTE 1 @ $55,860
Adjunct Faculty (FTE's & dollars)	FTE 1.25 (30 credit hours @ $1,200/credit hours in AY09/10) $36,000	FTE .25 (Adjuncts will teach 6 credits and will be self-supporting through tuition.) $7, 200	0	FTE 1.5/ $43,200
Teaching Assistants (Headcount)	0	0	0	0
Instructional Facilities (in dollars and/or sq. footage)	1,108 sf	0	0	1,108 sf
Office Space (Sq. footage)	161 sf	0	0	161 sf
Lab Space (Sq. Footage)	0	0	0	0
Computer & Networking (in dollars)	$66,000 (22 computers at $3,000 each)	0	0	$66,000
Research/ Instructional/ office Equipment (in dollars)	0	0	0	0
Support Staff (FTE's & dollars)	.1 FTE/$4,950	0	0	.1 FTE/$4,950
Supplies (in dollars)	$20,000 (CAD Software)	0	0	$20,000
Travel (in dollars)	0	0	0	0

UAF TVC
Tanana Valley Campus

Construction Management
& Drafting Technology
510 Second Avenue
Fairbanks, Alaska 99701
Phone # 907.455.2845
Fax # 907.455.2935

April 21, 2010

University of Alaska – Tanana Valley Campus
Drafting Technology Program
604 Barnette
Fairbanks, Alaska 99701

Attn: Thane Magelky

Re: Drafting Technology Associates of Applied Science (A.A.S.)

The Drafting Technology Advisory Committee would like to offer this letter of support for the establishment of an Associates of Applied Science in Drafting Technology at the University of Alaska's Tanana Valley Campus.

The proposed A.A.S. recognizes the need for drafts people to have a thorough understanding of the design and construction industries they will be entering as graduates of the program. The proposed AAS meets these needs by combining Construction Management courses focused on construction technologies with Drafting courses focused on the design and documentation side of the industry. In brief, DRT AAS graduates will have not only the ability to draft, but also a greater understanding of what they are drawing, which is an essential skill in communicating with contractors, engineers, and architects.

The design and construction industries are seeing the advent of new technologies, specifically Building Information Modeling (BIM), that require additional training and expertise in building systems than does traditional Computer Aided Drafting (CAD). As the use of this technology becomes more widespread, the need for drafts people familiar with and proficient in its use is going to increase. This proposal provides that additional training.

In closing, we would like to reiterate the Drafting Advisory Committee's support for the proposed Associates of Applied Science in Drafting Technology. The graduates of the program will be well prepared to enter the workforce and capable of meeting our needs as members of the industry.

Thank you.

Drafting Technology Advisory Committee

Signature	Title/Organization
Chi Mills	Design Alaska Chief Mechanical Engineer
Karl Wenger	Database Manager UAF Facilities Services
Julie Baumes	CAD Drafter FHR Alaska
[signature]	BETTISWORTH NORTH CAD/BIM MANAGER

UAF TVC Tanana Valley Campus

Construction Management
& Drafting Technology
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Thank you.

Drafting Technology Advisory Committee

Signature	WH Pacific Civil Engineer *Title/Organization*

UAF TVC
Tanana Valley Campus

Construction Management
& Drafting Technology
510 Second Avenue
Fairbanks, Alaska 99701
Phone # 907.455.2845
Fax # 907.455.2935

April 21, 2010

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Drafting Technology Program
604 Barnette
Fairbanks, Alaska 99701

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Thank you.

Drafting Technology Advisory Committee

Eric Campanelli — CAD/GIS Supervisor, GVEA
Signature — *Title/Organization*

MEMORANDUM

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS

DATE October 12, 2009

TO Thane Magelky
FROM Brian Marmor,

SUBJECT UAF TVC Drafting Technology Associate of Applied Science

Mr. Magelky,

I would like to thank you for asking me to participate in the Community Advisory Committee. It is valuable to hear an overview of courses available to students in our industry, and particularly valuable to see the philosophies that stand behind the courses. I appreciate the chance to meet with leaders of the drafting community, currently working in a professional setting, and I hope our comments and contributions are useful in considering a program best suited for students and professionals.

Your proposal to bolster coursework and offer an A.A.S degree is a great advantage to students without complicated revisions to the existing program. As a working professional, I see the additional coursework and degree a valuable addition, making graduates of the program more desirable and employable candidates.

I support the addition of the A.A.S. degree and compliment you on your professional outreach to substantiate your focus.

Brian Marmor, Associate AIA, Design Tech

212 FRONT STREET FAIRBANKS, ALASKA 99701
PHONE >> (907) 456-5780 FAX >> (907) 451-8522

2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503
PHONE >> (907) 561-5780 FAX >> (907) 562-5780

WWW.BETTISWORTHNORTH.COM

October 9, 2009

Design Alaska

UAF Tanana Valley Campus
Drafting Technology Program
University of Alaska, Fairbanks

Attn: Thane Magelky

Re: Drafting Technology Program Changes

Thank you for providing the Degree Program Changes proposal for the Drafting Technology program. As the largest employer in the Fairbanks area of drafters we are excited to continue to be involved in the direction of the program.

I reviewed the program changes for 2009 and find the following point exceptional positive:

1. The inclusion of the Construction Management courses to teach the technology of construction so that the drafters understand the work they are doing. The knowledge of how building are constructed will make a big difference in the skills of the AAS graduates. The certificated graduates will know how to draw, the AAS graduates will know what they are drawing.

2. The specific classes for Civil, Arch, Structural, Mechanical/Electrical, will be a great interface with the engineering and construction community, and allow for easy access to Adjunct faculty and guest speakers. The industry is structured along these lines and fits well into the job market.

3. The portfolio of work required of students is an excellent addition. It is similar to the fully integrated design packages that we produce in industry. The student will have a work product to show to prospective employers that demonstrates their understanding of construction technology and drafting.

4. The inclusion of other CAD packages including the Building Information Modeling (BIM) work is great. As the technology continually changes, the education of the new people into the field on new tools, will make them more valuable to the industry. Even just rewording of course titles modernizes the program to today's technology

5. The Certificate program has been reworked well to make sure it still has a place in the program. It will provide a narrower focus to a variety of fields including process technology and information technology.

Thanks again for the opportunity to review the changes and please let me know if there is any other way Design Alaska or myself can help the program continue to be successful.

Sincerely,

Design Alaska, Inc.

Chris Miller P.E.
Chief Mechanical Engineer

encl: none
xc:
c:\documents and settings\chm\desktop\tvc drafting program.docx Fax xc. Pages 1:

Design Alaska Inc. Architects • Engineers • Surveyors
601 College Road Fairbanks Alaska 99701 907 452 1241
Fax 907 456 6883 E-Mail mail@designalaska.com

ORIGINAL COPY

The following was passed at the April 5, 2010, Faculty Senate Meeting #166:

MOTION

The UAF Faculty Senate moves to approve an Associates of Applied Science in Drafting Technology.

EFFECTIVE: Fall 2010

RATIONALE: See the program proposal #37-UNP on file in the Governance Office, 314 Signers' Hall.

5 April 2010
President, UAF Faculty Senate Date

APPROVAL: _____ DATE: 4/6/10
Chancellor's Office

DISAPPROVED: _____ DATE: _____
Chancellor's Office

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Brief statement of the proposed program, its objectives and career opportunities.

The proposed Associate of Applied Science in Drafting Technology consists of courses that prepare a student for employment in the construction industry as engineering, architectural, or design draftspersons. The existing Certificate in Drafting Technology offers students a basic understanding of computer aided drafting, but little to no knowledge of what they will be asked to draw. The proposed AAS addresses the deficiency by utilizing existing Construction Management courses, and two new course offerings, to familiarize students with the different design disciplines and trades inherent in the construction industry. Students will graduate having the industry vocabulary and knowledge required to meet the skills of employees that architectural, engineering, and construction firms are demanding.