

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:   
Chancellor's Office

DATE: 4/6/10

DISAPPROVED: \_\_\_\_\_  
Chancellor's Office

DATE: \_\_\_\_\_

\*\*\*\*\*

**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.

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/](http://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.*

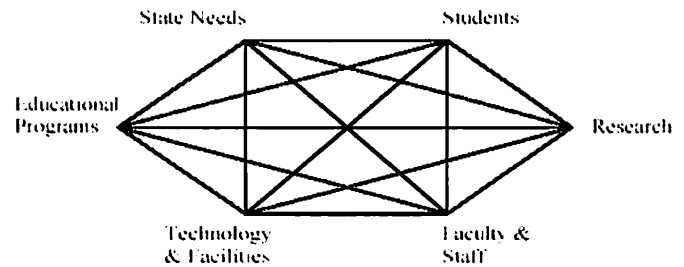
**RESOURCE COMMITMENT TO THE  
PROPOSED DEGREE PROGRAM**

<b>Resources</b>	<b>Existing</b>	<b>New</b>		<b>Total</b>
	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

**University of Alaska Board of Regents  
Program Approval Summary Form**

**MAU: University of Alaska Fairbanks  
Title: Associates of Applied Science in  
Drafting Technology**

**Target admission date: Fall 2010**



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

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.

What State Needs met by this program.

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.

What are the Student opportunities and outcomes? Enrollment projections?

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 little to 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.

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, those students that 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 awarded 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.

**Describe Research opportunities:**

Not applicable to this AAS program.

**Describe Fiscal Plan for development and implementation:**

We do not seek 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 little to 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.