



*TVC Director's Office*

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October 15, 2005

TO: UAF Faculty Senate

THRU: Bernice Joseph  
Executive Dean, CRCD

FROM: Rick Caulfield  
Director, Tanana Valley Campus/CRCD

RE: New degree proposal request—Certificate in Automotive Technology

The attached faculty proposal for a new Certificate in Automotive Technology is part of a larger package of changes to the current Certificate and AAS Degree in Maintenance Technology. This memo outlines those changes and the rationale for them.

It is important to note that while the attached form requests a “new” certificate in Automotive Technology such a program already exists and has for many years at TVC/UAF. It is currently offered as a concentration under the Certificate in Ground Vehicle Maintenance Technology. TVC has long had a regular faculty position (1.0 FTE) in Automotive Technology and a budget for adjunct faculty, administrative support, and commodities.

Our goal is to enhance and expand quality offerings in this area. Among other changes, this proposal separates out the auto program from what is now known as Maintenance Technology and allows it to stand alone.

**PROPOSED CHANGES:**

UAF's automotive offerings are currently part of the Certificate and AAS degree in Maintenance Technology. Maintenance Technology is a confusing amalgam of programs in four areas: airframe, powerplant, airframe and powerplant, and ground vehicle maintenance. Our goal is to “unpack” these certificates and degrees so that their requirements are more clear and each is more easily found in the UAF catalog. Students and community members alike tell us that each should stand alone so that the career pathways associated with them are evident. Doing so also allows them to be listed separately in the UAF catalog and marketed properly at distinct programs. At the same time, we propose updating our curriculum and delivery methods to align with industry standards and expressed community needs.

Associated with this new certificate proposal for Automotive Technology are the following related changes:

- Change existing title of AAS in Maintenance Technology to AAS in Aviation Maintenance. Existing AAS requirements for Aviation Maintenance remain the same. Certificates in Airframe and Powerplant, Airframe, and Powerplant remain unchanged. This consolidates all aviation related programs under a single certificate and AAS. It is also more consistent with Federal Aviation Administration (FAA) guidelines for proper naming of certificates.

- Change title of Certificate in Ground Vehicle Maintenance to Diesel/Heavy Equipment. Delete current concentrations in Automotive and Power Generation. This consolidates all diesel/heavy equipment courses and requirements under a single certificate.
- Create new stand-alone Certificate in Automotive Technology. Proposed requirements are outlined in the attached request for “new degree.” AAS concentration in Automotive will no longer be available.
- Power Generation concentration will no longer be available as such but courses now listed will continue to be offered as they have been for many years. A certificate of completion for a program in this area will be considered in the future.

#### RATIONALE:

This package of faculty-generated changes responds to emerging high-demand workforce needs and to expressed desires of students and industry representatives in the Fairbanks area. They reconfirm UAF’s intention to offer strong and easily-identifiable programs and courses in automotive technology, diesel/heavy equipment, airframe and powerplant, and power generation.

The existing Maintenance Technology AAS and the associated Certificate in Ground Vehicle Maintenance are confusing to prospective students and to industry. Enrollments in several of these programs have stagnated in recent years in part because program offerings were not visible. When looking in the UAF catalog, students cannot easily find headings for automotive, diesel/heavy equipment, and airframe/powerplant options. The proposed changes—reviewed and recommended by industry advisory committees—make UAF offerings in these areas coherent and transparent.

The proposed changes update our curriculum in keeping with the most current industry standards. For example, in the automotive realm our plan is to seek accreditation in selected areas from the National Automotive Technicians Education Foundation (NATEF).

Moreover, these changes make possible effective program delivery using proven cutting-edge instructional models and strategies. Students will have the option of enrolling in these certificate and AAS programs on a fulltime basis and moving even more quickly into the workforce. This model is the basis for a new \$1.99M federal grant that TVC just received focusing on automotive, diesel/heavy equipment, and related programs.

Finally, the new Certificate in Automotive Technology aligns UAF’s program with related offerings at UAA. The Anchorage program offers Ford and GM factory service programs that may be of interest to UAF students (it is unlikely that these factory programs will be offered in Fairbanks in the foreseeable future). This alignment of UAF and UAA programs enables those students interested in these factory programs to move on to the UAA program if desired (something not now easily done).

Please contact me or relevant TVC faculty if you have any questions about these proposed changes. Thank you.

Cc: TVC faculty  
Provost Reichardt

APPROVAL SIGNATURES FOR NEW CERTIFICATE IN AUTOMOTIVE TECHNOLOGY:

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Jim Baird, Faculty coordinator for Automotive and Diesel/Heavy Equipment      Date

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Ed Husted, Chair, TVC Curriculum Council      Date

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Richard A. Caulfield, Director, Tanana Valley Campus/CRCD      Date

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Bernice M. Joseph, Executive Dean, CRCD      Date

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Paul Layer, President, UAF Faculty Senate      Date

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Steve Jones, Chancellor, UAF      Date

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Mark Hamilton, President, University of Alaska      Date

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Brian Rogers, Chair, UA Board of Regents      Date

## II. IDENTIFICATION OF PROGRAM—CERTIFICATE OF AUTOMOTIVE TECHNOLOGY

### A. Description of the Program

1. Program Title—Certificate in Automotive Technology
2. Credential level of program—N/A
3. Admission requirements and prerequisites—Standard UAF requirements for certificate and AAS programs
4. Course descriptions of required and recommended elective courses—See Attachment 1.
5. Requirements for the degree. See Attachment 2 (includes sample course of study and 3-year cycle of course offerings).

### B. Program Goals

1. Objectives: Creating a distinct Certificate of Automotive Technology will position UAF to offer students a nationally-certified program for automotive service professionals. The program will be of interest to those seeking to become automotive technicians as well as service managers, auto parts providers, and auto shop owners/operators. The program will articulate with similar programs offered at the high school level. It will also allow students to move seamlessly into more advanced factory-authorized service programs.

Students will obtain training in maintenance and repair of automobiles, buses, light-duty trucks and related equipment. This one-year program enables students to gain a conceptual understanding of state-of-the-art automotive systems. It provides hands-on training in diagnosing causes of mechanical and electronic malfunctions, performing basic automotive maintenance and repair, and performing preventive maintenance and automotive emissions inspections. It also provides instruction in shop safety as well as opportunities for practicum experiences in automotive repair shops and parts supply facilities. It encourages students to develop themselves professionally with a goal of becoming ASE-certified through the National Institute of Automotive Service Excellence.

The program's goal is to apply for national certification through the National Automotive Technician's Education Foundation (NATEF) in at least four of eight possible areas within three years.

2. Relationship to "Purposes of the University": UAF and the UA system have major responsibilities for training Alaskans for Alaska's jobs. Workforce development has long been a vital part of the 'community college mission' of the university.

Automotive technology has been a part of the university's curriculum for years. Indeed, this proposal does not create a new automotive curriculum but instead 'repackages' that curriculum in a way that better meets the needs of industry, makes university offerings in this area more visible, and enables students to move more readily from job training to paid employment.

3. Occupational competencies to be achieved: TVC anticipates seeking NATEF certification for the program as a whole. Students enrolled in the program will be able to gain skills and experience required to become ASE-certified.
4. Relationship of courses to the program objectives: Courses to be offered under the new Certificate in Automotive Technology are updated from the current curriculum now in the UAF catalog. These courses have been reviewed and

endorsed by industry partners in the Fairbanks area. They will enable students to achieve the conceptual and practical knowledge and skills required for employment in the automotive field. They reflect current advances in technologies and instructional delivery and they are more closely aligned with similar programs offered at UAA and at Alaska Vocational Technical Center.

### III. PERSONNEL DIRECTLY INVOLVED WITH THE PROGRAM

#### A. List of faculty involved with the program

Regular faculty: Jim Baird, Assistant Professor of Automotive Technology and Faculty Coordinator, Automotive and Diesel/Heavy Equipment programs, Tanana Valley Campus

Adjunct faculty: TVC regularly hires skilled adjunct faculty to teach automotive and diesel/heavy equipment courses. These adjunct faculty commonly work in the automotive and diesel/heavy equipment industries in the Fairbanks area, thereby bringing into the classroom and shop the most current knowledge and practice available.

#### B. Administrative and coordinating personnel

Overall administration of TVC programs is the responsibility of Dr. Richard Caulfield, TVC Director. TVC is part of UAF's College of Rural and Community Development. Bernice M. Joseph is Executive Dean.

Director Caulfield and program faculty are assisted by TVC's Student Assistance and Advising Center director Michele Stalder and by other TVC support staff. Immediate program support at Hutchison Institute of Technology is provided by TVC administrative staff member Deborah Koons.

### IV. ENROLLMENT INFORMATION

#### A. Projected enrollment/present enrollment: TVC anticipates enrollment of at least 15 students each year in the Certificate program in Automotive Technology. This was the basis for TVC's recent success in securing \$1.99M from the US Department of Labor for program expansion.

Recent enrollments in TVC's automotive program have averaged about 8-10 students annually. We believe these enrollments have been lower for several reasons: 1) the program lacked catalog visibility due to its being located with the Maintenance Technology degree program, 2) the program was disrupted by facilities moves during remodeling of Hutchison Institute of Technology, and 3) change in faculty leadership led to reduced recruitment.

#### B. Method for projecting enrollment: The method used for projecting enrollments has three elements: 1) use of Alaska Department of Labor and Workforce Development data on high-demand, high-growth job categories in the Fairbanks area and in Interior Alaska, 2) formal consultation with business, industry, and labor leaders in the Fairbanks area on multiple occasions (see need for program below), and 3) analysis of current student enrollment trends and expressed needs.

#### C. Minimum enrollments required to maintain program for next 5 years: 15 students per year.

D. Maximum enrollment which program can accommodate: 20 per year.

E. Special restrictions on enrollments: none

V. NEED FOR PROGRAM

A. This request for a new Certificate in Automotive Technology does not create a new program as such but repackages and updates an existing curriculum previously offered under Maintenance Technology. This updated curriculum aligns more fully with that offered at UAA and elsewhere in the state, thus allowing student options for pursuing advanced study in factory-authorized service training programs.

B. Alaska's construction, oil and gas, mining, and related industries—all critical to Alaska's resource-based economy—need skilled workers and technicians to operate and maintain fleets of automobiles, trucks, and heavy equipment. The same is true for the tourism and hospitality sector, which maintains fleets of tour buses and automobiles for rental markets. Alaska's climate is tough on private automobiles and trucks as well; service technicians are essential to repairing and maintaining these vehicles, tuning them to address emissions standards, and assisting in making Alaska's vehicles safe for both drivers and passengers.

Alaska faces a severe shortage of skilled automotive technicians in the coming years. The Alaska Department of Labor and Workforce Development reports that workforce needs in this area are growing and that the existing workforce is 'graying'—over 40% of bus, truck, diesel, and heavy equipment repair personnel and operators are over 50 years of age.<sup>1</sup> A major conference on Alaska's workforce development needs in Kenai in April 2005 highlighted these concerns. Business, labor, and university participants alike expressed common concern about a coming 'perfect storm' where Alaska's resource development opportunities are expanding but in the end could be hampered by a lack of skilled technicians, operators, and other workers.

Transportation and construction have been on the Alaska Workforce Investment Board's short list of high-need "job clusters" since at least 2003 due to their growth potential (see *Commonwealth North* report "Alaska's Jobs for Alaska's people," June 2003, p. 5).

In the Fairbanks area, employers and community leaders have confirmed these high-demand, high-growth trends. On multiple occasions we have consulted about these trends and proposed curricular changes with a respected group of business leaders in the automotive industry. Those consulted include:

Rick Monsey	Gene's Chrysler
Jay McFetridge	NAPA Auto Parts
Jerry Million	North Pole High School
Greg Durdik	NAPA Auto Parts
Jim Scoles	Gene's Chrysler
Al Haynes	Seekins Ford
Dan Domke	Hutchison High School
Mike Everette	Gene's Chrysler

We have also had support for this proposed change from TVC's Community Advisory Council made up of the following members:

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<sup>1</sup> *Alaska Economic Trends*, September 2004; Statewide Employment Forecast, p. 4.

Click Bishop	Operating Engineers, Local 302
Harry Cook	Aviation Industry
Karen Cedzo	Delta/Greely area
Dave Dean	College Utilities
Ron Dixon (chair)	Rural Alaska Insurance
Dave Engen	Alaska Air National Guard
Steve Frank	River's Edge Resort
John Hollow	Fort Knox Mine
Charlene Ostbloom	Tanana Chiefs Conference
Rick Solie	Conoco Phillips
Debbie Tilsworth	Riverboat Discovery
Jerry Walker	Denali State Bank
Julie Wild-Curry	FNSBSD
Liz Woodyard	Fairbanks Memorial Hospital

In developing this proposal, our faculty have also consulted closely with UAA Automotive and Diesel/Heavy Equipment faculty member Kelly Smith. He has assisted with development of this proposed new certificate and is supportive of aligning the UAF and UAA programs for the benefit of students.

VI. OTHER: N/A

VII. RESOURCE IMPACT

A. Budget

TVC's FY06 budget for automotive technology amounts to approximately \$75K. This includes one regular 9-month tenure-track faculty member plus resources for hiring adjunct faculty and purchasing commodities. In addition, TVC's budget provides for administrative support at Hutchison Institute of Technology that is shared with two other programs.

Importantly, TVC has just received a notice of award for \$1.99M from the US Department of Labor's "President's Community-Based Job Training Grant Program" that will provide significant additional funding for the automotive, diesel/heavy equipment, power generation, and process technology programs. This three-year funding will enable TVC to expand its capacity in all of these programs, including automotive technology. Approximately \$26K will be available over 3 years for adjunct faculty hires and \$23K for equipment and supplies.

B. Facilities/Space needs

Meeting community needs for automotive technology requires TVC to expand its shop facilities beyond those now available at Hutchison Institute of Technology. Currently the auto and diesel/heavy equipment programs share a shop at Hutchison—an arrangement that hinders full development of both programs.

TVC has begun the process of identifying new shop space in Fairbanks for the automotive program. Working with UAF Facilities Services, we've determined that approximately 8100 square feet of space is required, including shop space, a classroom, an office, plus modest storage. Our hope is to identify and secure such space in late fall 2005.

Funding secured through the \$1.99M federal grant just received provides up to \$100K annually over three years to lease this space.

C. Credit hour production

In recent years, credit hour production in TVC's automotive program—offered as a concentration under Ground Vehicle Maintenance—has averaged about 220 credits per academic year.

With approval of this new certificate, expansion of shop space, an updated curriculum, and enhanced community marketing and support, we anticipate increasing this level of CHP at least 20% annually, up to program capacity.

D. Faculty

TVC's current Automotive faculty member, Jim Baird, is a term-funded faculty member. Already retired from the FNSBSD, he supports TVC's hiring of a regular tenure-track faculty member who will instruct and develop the program over the long term. TVC expects to begin this recruitment in Spring 2006 so that a new tenure-track faculty member is on board in August 2006.

E. Library/media equipment/services: TVC does not expect to place significant new demands on library and media services with this program. Students already have access to computer software in the program that is specific to automotive systems.

VIII. RELATION OF PROGRAM TO OTHER PROGRAMS WITHIN THE UA SYSTEM

A. Effects on Enrollments Elsewhere: As noted above, this proposed new Certificate in Automotive Technology complements changes in a number of other programs currently housed under Maintenance Technology (see cover memo). We believe these changes—unpacking the existing Maintenance Technology elements—will grow enrollments by making these vital workforce development programs more visible to students. We do not anticipate these changes having any major effect on enrollments elsewhere, except to grow opportunities for students seeking additional instruction in other TVC/UAF programs.

B. Does this duplicate/approximate programs elsewhere in the UA system? As noted above, this proposed change brings UAF's automotive program more in line with that offered at UAA. The proposed changes were developed through close consultation between UAF and UAA faculty. We believe this will be of benefit for both programs by enabling students to take consistent course offerings in both places.

C. How does the program relate to research or service activities? Community business leaders tell us that having a more visible and vibrant automotive program at TVC will open the door to much greater collaboration and opportunity. Having an identified TVC auto shop will provide a venue for specialized training, including automotive factory instructors who currently do not visit Fairbanks because facilities are lacking.

IX. IMPLEMENTATION

A. Date of Implementation: Fall semester 2006

B. Plans for Recruiting Students: TVC already recruits students for its automotive program under its current configuration. We expect to expand this significantly as this new certificate is created and in keeping with opportunities provided by

TVC's new \$1.99M federal grant. This includes new money for marketing and recruitment.

- C. Termination date: N/A
- D. Plans for Phasing Out Program if Unsuccessful: TVC will use standard Outcomes Assessment tools (see attached) to monitor and refine its automotive offerings through this new certificate. The program will also be subject to UAF's Program Review process—something that takes place every five years. This timeframe should be important in assessing program success.

This said, with expected job demand, strong community support, and with new federal funding, we only anticipate growth in this program—not decline and phase-out.

- E. Assessment of program: See Attachment C for outcomes assessment.
- X. REGENTS GUIDELINES: See attached.