

Associate of Applied Science in Diesel Power Technology

The Associate of Applied Science (AAS) in Diesel Power Technology is designed to teach students the skills needed to be successful as technicians in the medium- and heavy-duty truck and equipment service industry. The AAS may be completed in four semesters, which includes one summer semester of practicum. Laboratory experiences are performed on equipment and components currently used in the heavy-duty transportation, construction and power generation industries.

Career opportunities for graduates include manufacturer and independent repair and maintenance shops, fleets, construction, mining, aviation ground support, and the seafood processing industry. Employers require technicians to be drug free and physically fit, and to have a current vehicle operator's license with a good driving record. Equal opportunities are available for men and women.

This AAS program prepares students to understand the theory of, diagnose, and repair diesel engines, as well as medium- and heavy-duty drive trains, pneumatic and hydraulic brake systems, suspension steering, electrical/electronic systems, and heating and air conditioning systems on medium- and heavy-duty vehicle applications.

The AAS in Diesel Power Technology prepares students with the technical education and training necessary to be successful in a variety of careers related to the diesel maintenance and repair industry. Students will learn theory and gain hands-on experience with various systems including hydraulics, electrical and electronics, and engine overhaul. Career opportunities for graduates include manufacturer and independent repair and maintenance shops, fleets, construction, mining, maritime, aviation ground support, and the seafood processing industry.

The AAS in Diesel Power Technology is accredited by the Automotive Service Excellence (ASE) Education Foundation.

The AAS in Diesel Power Technology constitutes the first two years of the Bachelor of Science (BS) in Applied Technologies Leadership.

Licensure and/or Certification

The AAS in Diesel Power Technology prepares students to test for nationally recognized certifications in diesel engines, as well as medium- and heavy-duty drive trains, pneumatic and hydraulic brake systems, suspension & steering, electrical/electronic systems, and heating & air conditioning systems on medium- and heavy-duty vehicle applications.

Please go to UAA's Authorization by State (https://www.uaa.alaska.edu/academics/office-of-academic-affairs/provost_office/uaa-state-authorization/authorization.cshtml/) website for information about licensure or certification in a state other than Alaska.

Admission Requirements

- Complete the Admission Requirements for Associate Degrees. (<http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/undergraduate/>)

Special Considerations

- Employers require individuals to have their own tools. A list of entry-level required tools can be found on the Diesel Power Technology website (<https://www.uaa.alaska.edu/academics/community-and-technical-college/departments/transportation-and-power/academics/diesel-power-technology/diesel-power-tool-list.cshtml/>).
- Employers require technicians to be drug-free and physically fit and to have a current vehicle operator's license with a good driving record.

Graduation Requirements

- Complete the General University Requirements for Associate of Applied Science Degrees (<http://catalog.uaa.alaska.edu/undergraduateprograms/aasrequirements/>).
- Complete the General Education Requirements for Associate of Applied Science Degrees (<http://catalog.uaa.alaska.edu/undergraduateprograms/aasrequirements/generaleducationrequirements/>).
- Complete the following major requirements with a minimum grade of C:

Code	Title	Credits
Core Courses		
ADT A102	Introduction to Automotive Technology	3
ADT A121	Basic Electrical Systems	3
ADT A131	Auto Electrical II	3
ADT A152	Heavy-Duty Suspension and Steering	4
ADT A153	Medium/Heavy-Duty Diesel Engines	4
ADT A155	Heavy-Duty Brake Systems	4
ADT A156	Heavy-Duty Maintenance and Inspection	3
ADT A195 or ADT A295	Automotive Practicum I Automotive Practicum II	3
ADT A225	Mobile Heating, Ventilation and Air Conditioning Systems	3
ADT A227	Auto Electrical III	3
ADT A267	Heavy-Duty Diesel Engine Performance	4
ADT A268	Mobile Hydraulic Systems	4
ADT A269	Heavy-Duty Drive Trains	3
WELD A101	Introduction to Welding	3-4

or WELD A112 Shielded Metal Arc Welding (SMAW)

Total 47-48

A minimum of 60 credits is required for the degree.

Program Student Learning Outcomes

At the completion of this program, students are able to:

- Demonstrate academic proficiency necessary to pass national examinations within the domain.
- Demonstrate proficiency in performing occupationally related tasks in a professional setting.
- Integrate knowledge from diverse areas to develop effective diagnostic and repair strategies involving complex systems.
- Request, collect, summarize, evaluate, and apply oral and written information gathered from technical (e.g. schematics, technical bulletins, and service information) and nontechnical (e.g. customer oral and written reports) sources regarding symptoms and potential diagnostic and repair strategies for diesel powered equipment.
- Apply knowledge gained from previous education and experience to problem solving to aid in diagnosis and repair for the immediate situation.
- Demonstrate effective employability skills, including oral and written communication skills, as required by the 2014 accreditation standards for the National Automotive Technicians Education Foundation.
- Demonstrate technical knowledge and critical thinking necessary for success in the heavy-duty maintenance and repair industry.