AAS DEGREE - CODE #0493

BS DEGREE - CODE #0235

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As a mechanical engineering technology program graduate, you will be well prepared to be a mechanical engineer (B.S.) or technician (AAS) for the industry in engineering-related areas, including automotive component design; heating, ventilation, and air conditioning (HVAC); process and component design; mechanical systems design; energy systems; product development; and technical support and sales. You will be able to design, specify, test, analyze, and install mechanical systems. This broad content exposure occurs through the development of analytical skills and theory in the classroom and experience working with engines, complete energy systems, compressors, fans, pumps, controls, instrumentation, engineering graphics, and material testing.

ADVANTAGES

- Both the AAS and BS mechanical engineering technology programs are accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.
- The Bachelor of Science in mechanical engineering technology is recognized as a "professional degree" that qualifies for experience/education credit toward Professional Engineering (PE) licensure.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State mechanical engineering technology AAS graduates may enter directly into the construction supervision BTech, the interdisciplinary studies BTech, the mechanical engineering technology BS, or the technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES

A cooperative/transfer program involving one year of appropriate study in either mechanical engineering technology or engineering science at selected regional community colleges, together with a second year of study at Alfred State, will result in the awarding of the AAS degree to qualified graduates.

Graduates from the associate-level mechanical engineering technology program are eligible to continue their education by enrolling in a baccalaureate degree program in mechanical or related engineering technology at Alfred State or elsewhere. Our mechanical engineering technology AAS two-year degree program is the same as the first two years of the mechanical engineering technology BS four-year degree program.

OCCUPATIONAL OPPORTUNITIES

Automotive industry	Sales and applications
HVAC & R industry	Manufacturing
Development/design	Petroleum industry
Field service	Engineering aide
Installation supervision	Test technicians
Aerospace industry	Process equipment
Utility companies	MEMS and Microfabrication
Defense Industry	Energy Industry

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent:

Mechanical engineering technology (AAS degree): 100 percent – 100 percent continued their education.

Mechanical engineering technology (BS degree): 100 percent – 97 percent are employed; 3 percent continued their education.

RELATED PROGRAMS

Mechatronics Technology

ENROLLMENT AND GRADUATION DATA

AAS Degree	Enrollment (based on Fall census)
2021	8
2020	35
2019	18
	Degrees Awarded
2020-2021	11
2019-2020	11
2018-2019	19
BS Degree	Enrollment (based on Fall census)
2021	129
2020	166
2019	192
	Degrees Awarded
2020-2021	32
2019-2020	35
2018-2019	32

CERTIFICATION OR LICENSURE

The Bachelor of Science in mechanical engineering technology is recognized as a "professional degree" that qualifies for experience/education credit toward Professional Engineering (PE) licensure. Graduates from Alfred State's program are allowed six years of the required 12 years of education/experience credit and are eligible to take the Fundamentals of Engineering (FE), formerly called Engineer-in-Training (EIT), examination upon graduation.

Be advised that a prior felony conviction may impede a student's ability to receive licensure.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (AAS)

Required: Algebra, Geometry, Algebra 2

Recommended: Physics

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (BS)

Required: Algebra, Geometry, Algebra 2

Recommended: Physics

Courses that repeat or significantly overlap those taken in the student's associate degree program cannot be taken for upper-level credit. If the associate degree covered the subject matter in one of the required baccalaureate courses, a different course must be substituted and approved by the faculty adviser.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in

mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

REQUIRED EQUIPMENT

A tier 3 laptop computer is required for students entering the mechanical engineering technology programs. Laptop specifications are available at www.alfredstate.edu/required-laptops.

MECHANICAL ENGINEERING TECHNOLOGY - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

First

MECH	1203	Materials Science	3
MECH	1603	Graphics/CAD	3
COMP	1503	Freshman Composition	3
MATH	1033	College Algebra	3
GLST	2113	Global Perspectives:Spcl Topic	3
			15

Second

MECH	1663	Manufacturing Processes	3
MECH	4003	Solid Modeling	3
MECH	4523	Control System Fundamentals	3
MATH	2043	College Trigonometry	3
PHYS	1024	General Physics I	4
			16

Third

MECH	3334	Statics	4
MECH	3223	Mechanical Design Principles	3
MATH	1063	Technical Calculus I	3
PHYS	2023	General Physics II	3
XXXX	xxx3	Gen. Ed. Elective (per Advisement for BS Degree)	3
SPCH	1083	Effective Speaking OR	3
SPCH	xxx3	Effective Speaking Equivalent (for AAS Degree)	3
			16 - 19

Fourth

MECH	4024	Dynamics	4
MATH	2074	Technical Calculus II	4
MECH	xxx4	Tech. Elective	4
MECH	xxx4	Tech. Elective	4
			16

If not required to take MATH 1033 and MATH 2043, take LAS elective(s) to complete degree requirements.

GRADUATION REQUIREMENTS

- 63 credits
- 20 credits of liberal arts and sciences
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average
- Approval of department faculty
- Four of 10 General Education areas

MECHANICAL ENGINEERING TECHNOLOGY – BS DEGREE

TYPICAL FIVE- THROUGH EIGHT-SEMESTER PROGRAM

Fifth

MECH	7114	Applied Thermodynamics	4
MECH	5334	Mechanics of Materials	4
MECH	6334	Fluid Mechanics	4
LITR	xxx3	Literature Elective	3
CHEM	5013	Applied Chemical Principles	3
			18

Sixth

MATH	6114	Differential Equations	4
COMP	5703	Technical Writing II	3
MATH	7123	Statistics for Engr Tech & Sci	3
MECH	xxx3	Major Elective-Upper	3
SPCH	1083	Effective Speaking OR	3
SPCH	xxx3	Effective Speaking Equivalent	3
			16

Seventh

BSET	7001	Senior Seminar & Project Des	1
MECH	7603	Heat Transfer	3
MATH	7113	Economic Analy for Engr Tech	3
MECH	xxx3	Major Elective	3
XXXX	xxx3	Gen Ed Elective	3
XXXX	xxx4	Major Elective - Upper	4
			17

Eighth

BSET	8003	Senior Technical Project	3
MECH	xxx3	Major Elective - Upper	3
XXXX	xxx3	Liberal Arts/Science Elective	3
XXXX	xxx3	Liberal Arts/Science Elective	3
			12

Typical Liberal Arts/Science Electives:

HIST	1113	Hist of West Civil Since 1648	3
HIST	1143	Surv of American History I	3
HIST	2153	Surv of American History II	3
PLSC	1053	International Relations	3
PSYC	1013	General Psychology	3
FNAT	1023	Introduction to Theatre	3
FNAT	1313	Art History	3
SOCI	1163	General Sociology	3

BS DEGREE GRADUATION REQUIREMENTS

- Completion of above courses
- 126 credit hours
- 45 upper-division credit hours
- 60 credit hours of liberal arts and sciences
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average
- Approval of department faculty
- Seven of 10 General Education areas