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 technologist or technician for 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.

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

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	

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent:

Mechanical engineering technology (AAS degree): 100 percent - 50 percent are employed; 50 percent continued their education.

Mechanical engineering technology (BS degree): 100 percent – 90 percent are employed; 10 percent continued their education.

RELATED PROGRAMS

Motorcycle and Power Sports Technology

ENROLLMENT AND GRADUATION DATA

AAS Degree	Enrollment (based on Fall census)
2018	41
2017	48
2016	39
	Degrees Awarded
2017-2018	7
2016-2017	14
2015-2016	11

BS Degree	Enrollment (based on Fall census)
2018	185
2017	187
2016	193
	Degrees Awarded
2017-2018	47
2016-2017	58
2015-2016	27

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, SAT and/or ACT scores with a recommended combined reading/writing and math SAT score of 1080 or a composite ACT score of 21.

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.

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
XXXX	xxx3	Gen Ed Elective	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	3
			16

Fourth			
MECH	4024	Dynamics	4
MATH	2074	Technical Calculus II	4
MECH	3124	HVAC Systems	4
	OR		
MECH	4554	Computer Aided Mfg Fundamntals	4
MECH	4224	Mechanical Systems Design	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
SPCH	1083	Effective Speaking	3
MATH	7123	Statistics for Engr Tech & Sci	3
MECH	6643	Process Engineering & Manufact	3
			16

Seventh			
BSET	7001	Senior Seminar & Project Des	1
MECH	7603	Heat Transfer	3
MATH	7113	Economic Analy for Engr Tech	3
MECH	7153	Fluid Power Systems Design	3
EMET	5004	Instrumentation	4
XXXX	xxx3	Gen Ed/LAS Elective	3
			17

Eighth			
BSET	8003	Senior Technical Project	3
MECH	7403	Microfabrication Technology	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