

Energy Systems Technology and Education Center

Program Description	Type	Degree
Energy Systems Technology, I.T.C. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/itc-energy-systems-technology/)	Certificate	
Energy Systems Electrical Engineering Technology, A.A.S. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/aas-energy-systems-electrical-engineering-technology/)	Degree	A.A.S.
Energy Systems Instrumentation Engineering Technology, A.A.S. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/aas-energy-systems-instrumentation-engineering-technology/)	Degree	A.A.S.
Energy Systems Mechanical Engineering Technology, A.A.S. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/aas-energy-systems-mechanical-engineering-technology/)	Degree	A.A.S.
Energy Systems Nuclear Operations Technology, A.A.S. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/aas-energy-systems-nuclear-operations-technology/)	Degree	A.A.S.
Industrial Controls, A.A.S. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/aas-industrial-controls/)	Degree	A.A.S.
Industrial Cybersecurity Engineering Technology, I.T.C. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/itc-industrial-cybersecurity-engr-tech/)	Certificate	
Industrial Cybersecurity Engineering Technology, A.A.S. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/aas-industrial-cybersecurity-engr-tech/)	Degree	A.A.S.
Cyber Physical Systems Engineering Technology, B.A.S. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/bas-cyber-physical-systems-engr-tech/)	Degree	B.A.S.
Instrumentation and Automation Assistant, B.T.C. (http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/btc-instrumentation-and-automation-assistant/)	Certificate	

Applied Science, B.A.S. (<http://coursecat.isu.edu/undergraduate/technology/bachelor-applied-science/bas-applied-science/>) Degree B.A.S.

Overview

ESTEC offers a unique approach to educating students by providing the specific knowledge and skills needed in industry. These requirements have been developed with industry partners to assure that program graduates enter the workforce with the precise skills required by the energy industry in a broad spectrum of electrical, oil, gas, renewable, nuclear, and allied manufacturing sectors. Students learn through traditional classroom experience as well as through extensive laboratory exercises.

ESTEC was formed as a public/private partnership between Idaho State University, Idaho National Laboratory, and Partners for Prosperity. Curriculum and laboratory resources were developed with external funding from the US Department of Labor and the National Science Foundation.

Objectives

The Educational Objectives of the Energy Systems Engineering Technology programs at ISU reflect the application of curricular content. Graduates of the programs in the Energy Systems Technology & Education Center (ESTEC) at Idaho State University are able to:

1. Practice the Energy Systems Engineering Technology discipline successfully within community-accepted standards.
2. Provide leadership for and communicate effectively in a team-based environment in order to be agents of change in dynamically changing organizations.
3. Analyze and design optimized solutions to systems of people, technology, and information.
4. Practice teamwork and communications skills to develop a successful career.
5. Fulfill professional and ethical responsibilities in the practice in energy systems engineering, including social, environmental, and economical considerations.
6. Engage in professional service, such as participation in professional society and community service.
7. Engage in life-long learning activities, such as graduate studies or professional workshops.
8. Develop a professional career in the prevailing market that meets personal goals, objectives, and desires.

Admission

Students must meet minimum admissions criteria to qualify for entry into an Energy Systems Engineering Technology program. See specific program requirements at <https://www.isu.edu/estec/>. Acceptance into ESTEC programs is based upon available openings. Students interested in an Energy Systems program should understand that a felony criminal record may affect employability in the energy industry.

Entry into the Energy Systems Instrumentation Engineering Technology, Energy Systems Electrical Engineering Technology, and Industrial Controls Associate degree programs requires completion of: ESET 0100, ESET 0101, ESET 0101L,

ESET 0102, ESET 0102L, ESET 0141, and ESET 0142; the first two years of the Electrical Apprenticeship AAS degree program; or instructor approval. Program degrees will be awarded concurrently with completion of the Electrical Apprenticeship degree requirements.

Students are required to earn a grade of C- (1.7) or better in each ESET and INST prefixed course and a cumulative 2.0 GPA in ESET and INST courses to advance each semester and count toward an ESTEC degree or certificate. If the student fails to complete any math, theory, or lab course, then that course must be repeated and a passing grade obtained before the student can advance in the program. The student must exit the program and make up the deficiency through advisor-approved methods. The student will then be allowed to repeat the course at the next available program opening. Specific information is available in the program's student handbook.

The courses listed in each program will be taught in sequential blocks of instruction. Students must register concurrently for the lab course associated with each theory course. For a Program Information Packet, visit <https://www.isu.edu/electricalengineeringtechnology/program-handbook--forms/>, which leads to descriptions of each program in general, course descriptions, lists of course sequences, and the cost of books, tools, uniforms, fees, and other expenses.

For all Energy Systems Engineering Technology programs, a student who has successfully completed ESET 0141 and ESET 0142, Applied Mathematics I and II, may enroll directly into an academic math course that requires MATH 1147 as a prerequisite. A student who has successfully completed ESET 0140, Applied Technical Intermediate Algebra, may enroll directly into an academic math course that requires MATH 1108 as a prerequisite.

Official articulation agreements have been established with post-secondary and secondary schools. Where these agreements exist, the specific block of training (i.e., session/semester/year) will be accepted as equivalent to that taught at ISU and will count equally toward graduation.

Faculty (<http://coursecat.isu.edu/undergraduate/technology/energysystemstechnologyandeducationcenter/faculty/>)

ESET Courses (<http://coursecat.isu.edu/undergraduate/allcourses/eset/>)