

ENERGY TECHNICAL SPECIALIST

Delivery: Daytime and Online Classes
 Start: Fall Semester, Full-Time
 Location: Rosemount Campus

Outcomes

Energy Technical Specialist A.A.S. Degree60 cr.

Major Description

The Energy Technical Specialist A.A.S. Degree has been developed using funding from a U. S. Department of Labor High Growth Job Training initiative Grant. The goal of the degree is to train students in the field of energy technology. Due to the increasing age of the current energy workforce and the growth of the renewable energy industry, it is estimated that there will be a great demand for skilled workers in the energy industry. The energy Technical Specialist, A. A. S. degree will convey the skills and knowledge necessary to be successful in both traditional and renewable energy fields. The degree will prepare students for work (primarily as technicians) in the following industries: electric power generation, natural gas distribution, ethanol production, biodiesel production, wind turbine maintenance or solar energy.

Work Environment

Energy maintenance technicians work in energy generation plants. Depending on the areas of focus, these technicians work in either traditional fossil fuel (coal-fired) plants, nuclear power generation plants, or other energy specializations. The Minnesota energy companies support and are involved with this program through the Minnesota Energy Consortium.

Students entering into the Energy Technical Specialist program should realize that the energy industry is a highly specialized industry and there are extraordinary employment characteristics associated with the power industry. Depending on the energy company, the hiring managers may require a federal background check, psychological testing, drug and alcohol testing, fingerprinting for FBI criminal investigation, and a physical if necessary for a position. The industry is solely responsible for facilitating the employment prerequisites.

Potential Job Titles

- Power Plant Technician
- Power Plant Operator
- Energy Plant Maintenance Technician
- Power Generation Technician

Salary Data

- Average Wage (U.S.): \$36.41/hour
- Top Earners (U.S.): \$43.49/hour

ENERGY TECHNICAL SPECIALIST – A.A.S. DEGREE

*This is a sample course sequence.
 Please contact your program advisor regarding your academic plans.*

First Year - First Semester

ETSA1515	Intro to Industrial Safety and Health	2
ETSA1300	Intro to Trad/Renewable Energy	3
ETSA1511	Fundamentals of AC/DC Electricity I	3
ETSA1512	Fundamentals of AC/DC Electricity II	3
MATS1300	College Algebra	3
Total Credits		14

First Year - Second Semester

ETSA1507	Digital Electronics	3
ETSA1523	Print Reading	3
ETSA1552	Basic Metal Joining and Fabrication	2
ETSA1541	Mechanical Fundamentals	3
PHYS1050	Introduction to Physics	3
Total Credits		14

Second Year - First Semester

ETSA2516	Mechanical Systems II	4
ETSA1531	Process Controls/Instrumentation I	3
ETSA2512	Hydraulics	3
ETSA2513	Pneumatics	3
BIOL1110	Environmental Science	3
Total Credits		16

Second Year - Second Semester

ETSA2543	PLC Fundamentals	3
ETSA2546	Powerplant Technology (Fossil Fuel Emphasis)	4
ETSA2547	Mechanical Fundamentals for Process Controls	3
ENGL1150	Composition I	3
SPEE1020	Interpersonal Communications	3
Total Credits		16

TOTAL PROGRAM REQUIREMENTS 60



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TECHNICAL COLLEGE

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