

Energy Operations

Semester Course Outline • 2018 – 2019



20 Months (4 Semesters and 1 Summer Session) • Revised: 2/26/18

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 75.5



First Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
EO 103	Fundamentals of Energy Operations, Production, and Distribution	84	3
ET 105	OSHA/Safety	14	.5
ET 107	Torque Certifications	14	.5
ET 130	Basic Valves	14	.5
ET 135	Manlift and Forklift Operations	14	.5
ET 150	Mechanical Drives and Pumps	84	3
EST 103	DC Electronics	112	4
EST 109	AC Electronics	112	4
AED 100	Automated External Defibrillator	14	.5
HAZ 100	Hazardous Materials Safety	14	.5
Total		476	17

First Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
EO 110	Fundamentals Thermodynamics Theory and Lab	84	3
ET 110	Plant Blueprints and Drawings	42	1.5
ET 175	Basic Motor Controls	84	3
ET 185	Fluid Power	84	3
MATH 117	Foundations of Trigonometry	15	1
WLD 230	Structural Material Welding	84	3
• Selected Communications Course (Choose one) COMM 101 – Communications and Career Strategies ENGL 101 – Composition * (CSS 100 – Career Search Strategies .5 credit) SPCM 101 – Fundamentals of Speech * (CSS 100 – Career Search Strategies .5 credit)		45	3
Total		438	17.5

First Year – Summer Session

Course Number	Course Title	Clock Hours	Credits
EO 216 or SCT 100	Internship/Capstone Project or Solar Car Team	300	5
Total		300	5

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Second Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
EO 202	Introduction to Electric Industry	84	3
EO 205	Gas Turbines and Combined Cycle Operations	112	4
EO 211	Power Generation, Transmission, and Distribution	84	3
RBTC 205	Programmable Logic Controllers	84	3
<ul style="list-style-type: none"> Selected Mathematics Course (Choose one) MATH 100 – Applied General Math MATH 101 – Intermediate Algebra MATH 102 – College Algebra * 		45	3
<ul style="list-style-type: none"> Selected Social Science Course (Choose one) ECON 105 – Leadership in the Global Workplace ECON 201 – Principles of Microeconomics I * ECON 202 – Principles of Macroeconomics II * SOC 100 – Introduction to Sociology * 		45	3
Total		454	19

Second Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
EO 206	Gas Processing	84	3
EO 208	Ethanol Biofuels Production	84	3
EO 212	Boiler Operations and Refrigeration	84	3
EO 214	Instrumentation and Controls Simulations	84	3
EO 215	Plant Operation and Troubleshooting	56	2
<ul style="list-style-type: none"> Selected Behavioral Science Course (Choose one) PSYC 100 – Psychology of Human Relations PSYC 101 – General Psychology * 		45	3
Total		437	17

Elective Course: With the instructor’s approval, SCT 100 – Solar Car Team may be substituted for up to 6 credits of course work or taken as an additional elective.

- Students will select a course in each of the areas listed to meet general education requirements. Courses marked with an asterisk (*) can be transferred directly to the university system and may be substituted for recommended courses on the outline. Students should speak with an advisor before doing so.

Students who select to take transferable communications course ENGL 101 or SPCM 101, must also register for CSS 100 – Career Search Strategies for .5 credit. This curriculum is required for all Lake Area Tech graduates and is included in the COMM 101 course but is separate from the university system.