Energy Operations

Semester Course Outline • 2024 – 2025

20 Months (4 Semesters, 1 Summer Session) • Revised: 2/13/24

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 73.5

First Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
EO 103	Fundamentals of Maintenance Operations	84	3
ET 105	OSHA/Safety, Torque Certifications, Valves, and Lifts	56	2
ET 150	Mechanical Drives and Pumps	84	3
EST 116	DC/AC Electronics	112	4
EST 121	Digital Systems A	84	3
EST 123	Digital Systems B	28	1
AED 100	Automated External Defibrillator	14	.5
	Total	462	16.5

First Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
EO 110	Fundamentals Thermodynamics Theory and Lab	84	3
ET 185	Fluid Power	84	3
RBTC 175	Basic Motor Controls	84	3
RBTC 205	Programmable Logic Controllers	84	3
MATH 117	Foundations of Trigonometry	15	1
WLD 230	Structural Material Welding	56	2
• Selected Communications Course (Choose one) CMST 101 – Foundations of Communication * (CSS 100 – Career Search Strategies .5 credit) COMM 101 – Communications and Career Strategies ENGL 101 – Composition * (CSS 100 – Career Search Strategies .5 credit)		45	3
	Total	452	18

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

Second Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
EO 202	Introduction to Electric Industry	84	3
EO 211	Power Generation, Transmission, and Distribution	84	3
ET 110	Plant Blueprints and Drawings	42	1.5
CSC 102	Window Applications for Technicians	45	3
HAZ 100	Hazardous Materials Safety	14	.5
● Selected Mathematics Course (Choose one) MATH 100 – Applied General Math MATH 101 – Intermediate Algebra MATH 114 – College Algebra *		45	3
● 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	359	17

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
ET 215	Plant Operation and Troubleshooting	56	2
● 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 CMST 101 or ENGL 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.