

Energy Operations

Semester Course Outline • 2023 – 2024

20 Months (4 Semesters, 1 Summer Session) • Revised: 2/7/23

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 74



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
WLD 230	Structural Material Welding	56	2
AED 100	Automated External Defibrillator	14	.5
CSS 100	Career Search Strategies	8	.5
HAZ 100	Hazardous Materials Safety	14	.5
Total		540	19.5

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 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
<ul style="list-style-type: none"> • Selected Communications Course (Choose one) CMST 101 – Fundamentals of Speech COMM 101 – Communications and Career Strategies ENGL 101 – Composition * 		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 211	Power Generation, Transmission, and Distribution	84	3
CSC 102	Window Applications for Technicians	45	3
<ul style="list-style-type: none"> Selected Mathematics Course (Choose one) MATH 100 – Applied General Math MATH 101 – Intermediate Algebra MATH 114 – 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		303	15

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
<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.