

MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING WITH SPECIALIZATION IN ENERGY/ENVIRONMENT/ ECONOMICS (E3)

Curriculum

Code	Title	Credit Hours
Core Courses		
(24)		
CAE 523	Statistical Analysis Engg Data	3
ENVE 501	Environmental Chemistry	3
ENVE 506	Chemodynamics	3
ENVE 542	Physcheml Prcs in Envir Eng	3
ENVE 580	Hazardous Waste Engineering	3
Select one E3 course from Group A		3
Select two E3 courses from Group B ¹		6

Elective Courses		(0-2)
Select zero to two credit hours		0-2
Thesis Research		(6-8)
ENVE 591	Research and Thesis M.S.	6-8

Minimum degree credits required: 32

¹ In addition to the listed E3 Group B course options, Master of Science in Environmental Engineering students may select CAE 589 as a Group B course option.

Students may apply up to two 400-level courses to the M.S. degree requirements with their adviser's approval.

E3 Courses

See descriptions under the respective department's course listings.

Group A

CHE 503	Thermodynamics	3
CHE 536	Computational Techniques in Engineering	3
CHE 541	Renewable Energy Technologies	3
CHE 542	Fluidization and Gas-Solids Flow Systems	3
CHE 565	Fundamentals of Electrochemistry	3
ECE 550	Power Electronic Dynamics and Control	3
ECE 551	Advanced Power Electronics	3
ECE 552	Adjustable Speed Drives	3
ECE 553	Power System Planning	3
ECE 554	Power System Relaying	3
ECE 555	Power Market Operations	3
ECE 557	Fault-Tolerant Power Systems	3
ECE 558	Power System Reliability	3
ECE 559	High Voltage Power Transmission	3
ECE 560	Power Systems Dynamics and Stability	3
ECE 561	Deregulated Power Systems	3
ECE 562	Power System Transaction Management	3
ECE 563	Computational Intelligence in Engineering	3
ECE 564	Control and Operation of Electric Power Systems	3
MMAE 517	Computational Fluid Dynamics	3
MMAE 520	Advanced Thermodynamics	3
MMAE 522	Nuclear, Fossil-Fuel, and Sustainable Energy Systems	3
MMAE 523	Fundamentals of Power Generation	3
MMAE 524	Fundamentals of Combustion	3
MMAE 525	Fundamentals of Heat Transfer	3
MMAE 526	Conduction and Diffusion	3
MMAE 527	Heat Transfer: Convection and Radiation	3

Group B

CHE 541	Renewable Energy Technologies	3
CHE 560	Statistical Quality and Process Control	3

ENVE 501	Environmental Chemistry	3
ENVE 506	Chemodynamics	3
ENVE 542	Physiochemical Processes in Environmental Engineering	3
ENVE 551	Industrial Waste Treatment	3
ENVE 561	Design of Environmental Engineering Processes	3
ENVE 570	Air Pollution Meteorology	3
ENVE 577	Design of Air Pollution Control Devices	3
ENVE 578	Physical and Chemical Processes for Industrial Gas Cleaning	3
ENVE 580	Hazardous Waste Engineering	3