

MASTER OF ENGINEERING IN ENERGY SYSTEMS, ENERGY TRANSMISSION AND MARKETS TRACK

Curriculum

Code	Title	Credit Hours
Core Courses		(9)
CHE 543	Energy, Environment, and Economics	3
ECE 418	Power System Analysis	3
MMAE 522	Nuclear, Fossil-Fuel, and Sustainable Energy Systems	3
Energy Transmission and Markets Courses		(12-14)
Select 12-14 credit hours from the following courses:		12-14
ECE 411	Power Electronics	4
ECE 412	Hybrid Electric Vehicle Drives	4
ECE 551	Advanced Power Electronics	3
ECE 555	Power Market Operations	3
ECE 556	Power Market Economics and Security	3
ECE 561	Deregulated Power Systems	3
ECE 562	Power System Transaction Management	3
ECE 564	Control and Operation of Electric Power Systems	3
ECE 597	Special Problems	1-3
Elective Courses		(7-9)
Select seven to nine credit hours from the following courses: ¹		7-9
CAE 513	Building Science	3
CAE 515	Building Energy Modeling	3
CAE 526	Energy Conservation in Buildings	3
CHE 541	Renewable Energy Technologies	3
ECE 411	Power Electronics	4
ECE 412	Hybrid Electric Vehicle Drives	4
ECE 442	Internet of Things and Cyber Physical Systems	3
or ECE 510	Internet of Things and Cyber Physical Systems	
ECE 537	Next Generation Smart Grid	3
ECE 539	Computer Aided Design of Electric Machines	3
ECE 551	Advanced Power Electronics	3
ECE 552	Adjustable Speed Drives	3
ECE 555	Power Market Operations	3
ECE 556	Power Market Economics and Security	3
ECE 561	Deregulated Power Systems	3
ECE 562	Power System Transaction Management	3
ECE 563	Artificial Intelligence in Smart Grid	3
ECE 564	Control and Operation of Electric Power Systems	3
ECE 579	Operations and Planning and Distributed Power Grid	3
ECE 580	Elements of Sustainable Energy	3
ECE 581	Elements of Smart Grid	3
ECE 582	Microgrid Design and Operation	3
ECE 597	Special Problems	1-3
MMAE 425	Direct Energy Conversion	3
MMAE 433	Design of Thermal Systems	3
MMAE 453	Electrified Vehicle Powertrains	3

2 Master of Engineering in Energy Systems, Energy Transmission and Markets Track

MMAE 523	Fundamentals of Power Generation	3
MMAE 525	Fundamentals of Heat Transfer	3

Minimum degree credits required: 30

¹ Course must not have been used to fulfill specialization course requirement.