

List of Power and Energy Courses

Course Number	Course Title	Credits
BAE 503	Fundamentals of Biorenewable Resource Engineering	3
BAE 504	Biofuels Production	3
BAE 505	Thermochemical Processing of Biomass	3
BAE/EE/EGR 543	Solar Cell Devices and Systems for Electrical Energy Generation	3
BAE/ME 580	Heating, Ventilating and Air Conditioning	3
BAE/EE/EGR/ME/MFS 583	Industrial Energy Utilization and Assessment	3
CE 351	Introduction to Environmental Engineering	3
CE 433	Railway Freight and Passenger Operations and Intermodal Transportation	3
CE 533	Railroad Facilities Design and Analysis	3
CE/EGR 553	Environmental Consequences of Energy Production	3
CHE 565	Environmental Chemistry	3
CME 425	Heat and Mass Transfer	3
CME 515	Air Pollution Control	3
CME/EGR/MFS 523	Concepts, Assessment Tools, and Methods in Sustainable Power and Energy	3
CME/EGR 542	Electric Power Generation Technologies	3
CME/EE/EGR 549	Power and Energy Experiences	3
CME 580	Design of Rate and Equilibrium Processes for Water Pollution Control	3
EE 415G	Electromechanics	3
EE 416G	Energy Conversion Lab	2
EE 503	Power Electronics	3
EE 517	Advanced Electromechanics	3
EE 518	Electric Drives	3
EE 531	Alternative and Renewable Energy Systems	3
EE 532	Smart Grid: Automation and Control of Power Systems	3
EE 533	Advanced Power System Protection	3
EE 535	Power Systems: Generation, Operation, and Control	3
EE 536	Power System Fault Analysis and Protection	3
EE 537	Electric Power Systems I	3
EE 538	Electric Power Systems II	3
EE 539	Power Distribution Systems	3
EE/EGR 546	Electric Power Systems Fundamentals	3
EGR 240	Global Energy Issues	3
EGR 521	Renewable Energy	3
EGR 540	Power Economics and Public Policy	3
EGR/CME 542	Electric Power Generation Technologies	3
EGR/EE 546	Electric Power Systems Fundamentals	3
ME 321	Engineering Thermodynamics II	3
ME 325	Elements of Heat Transfer	3
ME 515	Rotordynamics of Turbomachinery	3
ME 530	Gas Dynamics	3
ME 548	Aerodynamics of Turbomachinery	3
ME 549	Power Generation	3
ME 563	Basic Combustion Phenomena	3
MNG 511	Mine Power System Design	3
MNG 575	Coal Preparation Design	3

Special Topics Courses (XXX 599) that are (or have been) Power and Energy Elective

Topics in Chemical Engineering: Renewable Energy I	3
Topics in Chemical Engineering: Renewable Energy II	3
Topics in Chemical Engineering: Biological Conversion of Biomass to Fuels and Chemicals	3
Topics in Chemical Engineering: Electrochemical Energy Storage	3
Topics in Electrical Engineering: Hybrid and Electric Vehicle-Electrical Systems and Components	3
Topics in Electrical Engineering: Efficient and Renewable Power Systems Operations	3
Topics in Electrical Engineering: Hybrid and Electric Vehicle and Aircraft	3
Topics in Engineering: Nuclear Engineering	3
Topics in Materials Science: Electrochemical Energy Storage	3
Topics in Mechanical Engineering: Nuclear Engineering	3
Topics in Mechanical Engineering: System Thinking for Sustainability	3
Topics in Mechanical Engineering: Sustainable Power Energy Assessment	3