



Mindanao University of Science and Technology
College of Engineering and Architecture
Graduate Program

MASTER OF Science in ELECTRICAL ENGINEERING

Curriculum

Effective SY 2016-2017

Course	Course Description	Credit Units
Core Courses (9 units)		
MEP 501	Applied Optimization and Linear Models	3
MEP 502	Computational Methods for EE/ME/CE	3
MEP 503	Mathematical Modelling and Applications	3
MEP 504	Advanced Engineering Math 1	3
MEP 505	Advanced Engineering Math 2	3
MEP 506	Advanced Numerical Methods	3
Major Courses (21 units)		
MES 511	Renewable Energy Resources	3
MES 512	Power Transmission and Distribution Systems	3
MES 513	Energy Demand Analysis and Forecasting (2-3)	3
MES 514	Economics of Electricity Market and Planning	3
MES 515	Power Systems Operation and Control	3
MES 516	Solar Energy	3
MES 517	Optimization of Power Systems	3
MES 518	Industrial and Power Electronics	3
MES 519	Economics of Energy Projects	3
MES 520	Energy Price Theory	3
MES 521	Electric Power Systems Economics	3
MES 522	Energy Management in Buildings	3
MES 523	Industrial and Power Electronics	3
MES 524	Electromagnetics	3
MES 525	Embedded Systems	3
MES 526	Robotics	3
MES 528	Demand-Side Management	3
MES 529	Power Systems Dynamic and Stability	3
MES 530	Organization and Finance of Power Utility	3
MES 527	Signal Processing	3

Course	Course Description	Credit Units
MES 531	Optimization and AI Applications in Power Systems	3
MES 532	Organization and Finance of a Power Utility	3
MES 533	Energy-Economic Modelling and Policy Analysis	3
MES 534	Biomass Conversion	3
MES 535	Solar Design Methods and Application	3
MEM 530	Mechatronics	3
MEM 531	Machine Learning	3
Graduate Electives (maximum of 6 units)		
MEP 551	Industrial Ecology	3
MEP 552	Solid and Hazardous Waste Management	3
MEP 553	Environmental Sustainability and Economics	3
MEP 554	Development and Evaluation of Energy Projects	3
MEP 555	Energy Resources and Technologies	3
MEP 556	Energy, Environment and Climate Change: Issues and Strategies	3
MEP 557	Power Sector Management under Deregulation	3
MEP 558	Environmental Economics	3
MEP 559	Environmental Policy and Management of Energy Systems	3
MEP 560	Rational Use of Energy in Buildings	3
MEP 561	Clean Coal Technologies and Carbon Capture and Sequestration	3
MEP 562	Community and Climate Adaptation	3
MEP 563	Land Use and Climate Change	3
MEP 564	Clean Development Mechanism: Principles and Practices	3
MEP 565	Climate Change and Adaptation in Water Sector	3
MEP 566	Climate Change and Sustainable Development Workshop	3
THESIS		
MES 601	Thesis 1	6
MES 602	Thesis 2	6

Summary of Units

Core Courses	9 units
Major Courses	21units
Electives	6 units
Master's Thesis	12
TOTAL	48 units

Notes:

1. Major courses taken in excess of the required 21 units can be applied in lieu of electives.
2. Maximum of 6 units of elective courses credited towards the degree.
3. Electives taken in excess of 6 units cannot be applied to cover any deficiency in core and major courses.