

# Table of Curriculum

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit (Assignment)	Semester	Note
Mandatory Major	EEW501	80.501	Introduction to Energy Science and Engineering	3:0:3	Fall	⊙
Elective	EEW502	80.502	Nature of the Chemical Bond	3:0:3	Fall	⊙
	EEW503	80.503	Molecular Thermodynamics and Energy System	3:0:3	Spring	
	EEW504	80.504	Advanced Quantum Mechanics	3:0:3	Fall	⊙
	EEW505	80.505	Principles of Statistical Thermodynamics	3:0:3	Fall	⊙
	EEW506	80.506	Introduction to Electrochemical science for energy materials	3:0:3	Fall	⊙
	EEW507	80.507	Thermal Physics for Catalysis and Chemical Reactions	3:0:3	Fall	⊙
	EEW508	80.508	Surface Physics and Chemistry	3:0:3	Fall	⊙
	EEW509	80.509	Theory of Electron Microscopy and Its Experiment	3:0:3	Fall	⊙
	EEW510	80.510	Design of Functionalized Nanostructures	3:0:3	Fall	⊙
	EEW511	80.511	Hydrogen Energy I. Storage	3:0:3	Spring	⊙
	EEW512	80.512	Sustainable Catalysis	3:0:3	Spring	⊙
	EEW513	80.513	Water Treatment and Desalination	3:0:3	Spring	⊙
	EEW514	80.514	Membrane Science and Engineering for EEW Systems	3:0:3	Fall	⊙
	EEW520	80.520	Solid State Physics for Nanodevices	3:0:3	Spring	⊙
	EEW521	80.521	First-Principles Calculations for Nano Materials	3:0:3	Fall	⊙
	EEW522	80.522	Transport and Optics in Nanodevices	3:0:3	Fall	⊙
	EEW523	80.523	Organic Semiconductor Devices	3:0:3	Fall	⊙
	EEW524	80.524	Topics in Physical Properties of Energy Science	3:0:3	Spring	⊙
	EEW525	80.525	Semiconductor Photoelectrochemistry: Fundamentals and Energy Applications	3:0:3	Fall	⊙
	EEW530	80.530	Special Topics in Energy Storage Devices Using Nanomaterials	3:0:3	Fall	⊙
	EEW531	80.531	Electrochemistry for Energy Applications	3:0:3	Spring	⊙
	EEW532	80.532	Special Topics in Functional Nanoscale Oxides	3:0:3	Fall	⊙
	EEW533	80.533	Advanced Catalytic Chemistry for EEWS	3:0:3	Spring	⊙
	EEW540	80.540	Transport Phenomena in EEWS System	3:0:3	Fall	⊙
	EEW550	80.550	Solar Energy Conversion	3:0:3	Spring	⊙
	EEW555	80.555	Supramolecular Chemistry	3:0:3	Spring	⊙
	EEW560	80.560	Mechanical Properties of Nanostructured Materials	3:0:3	Spring	⊙
	EEW570	80.570	Diffraction from Hard- and Soft-condensed Matter	3:0:3	Spring	⊙
	EEW580	80.580	Lattice Defects for Energy Science	3:0:3	Fall	⊙
	EEW600	80.600	Solar Energy System Design and Characterization	3:0:3	Fall	
EEW601	80.601	Special Topics in EEWS (Energy and Material Science)	3:0:3	Spring-Fall		
EEW602	80.602	Special Topics in EEWS II	3:0:3	Spring-Fall		
EEW603	80.603	Fundamentals and Applications of	3:0:3	Spring		

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			Molecular Dynamics Simulations			
	EEW604	80.604	Materials and Processing in Photovoltaic Devices	3:0:3	Spring	
	EEW610	80.610	Advanced Batteries	3:0:3	Fall	
	EEW666	80.666	Nanomaterials for Photocatalysis	3:0:3	Fall	
	EEW800	80.800	Advanced Electron Microscopy	3:0:3	Fall	
	EEW810	80.810	Atomic Level Simulations of Materials and Molecules	2:3:3	Fall	
	EEW830	80.830	Design and Synthesis of Energy Materials by Building Block Approach	3:0:3	Fall	
	EEW840	80.840	Mechanostereochemistry and Molecular Nanotechnology	3:0:3	Fall	
Research	EEW960	80.960	Thesis Research in MS		Spring-Fall	
	EEW966	80.966	Seminar (MS)	1:0:1	Spring-Fall	
	EEW980	80.980	Thesis Research in Ph.D.		Spring-Fall	
	EEW986	80.986	Seminar (Ph.D.)	1:0:1	Spring-Fall	

©: Course mutually recognized by undergraduate and graduate programs

※Course classification, course title, and mutual recognition of credits may differ according to the effective year of the requirements.