

Bachelor of Science in Renewable Energy Engineering

Curriculum

Required courses and recommended terms during which they should be taken:

Freshman Year	Fall	
CHE 201	General Chemistry	3
CHE 204	General Chemistry Lab	1
ENGR 101	Introduction to Engineering I*	2
MATH 251	Differential Calculus	4
WRI 121	English Composition	3
Total		13

Freshman Year	Winter	
CHE 202	General Chemistry	3
CHE 205	General Chemistry Lab	1
ENGR 102	Introduction to Engineering II*	2
MATH 252	Integral Calculus	4
PHY 221	General Physics with Calculus	4
WRI 122	English Composition	3
Total		17

Freshman Year	Spring	
MATH 254N	Vector Calculus I	4
PHY 222	General Physics with Calculus	4
SPE 111	Fundamentals of Speech	3
WRI 227	Technical Report Writing	3
	Social Science elective	3
Total		17

Sophomore Year	Fall	
CHE 260	Electrochemistry for Renewable Energy Applications	4
EE 221	Circuits I	4
MATH 321	Applied Differential Equations I	4
PHY 223	General Physics with Calculus	4
Total		16

Sophomore Year	Winter	
EE 223	Circuits II	4
ENGR 211	Statics	4
ENGR 266	Computer Programming for Engineers	3
HIST 356	A History of Energy	3
Total		14

Sophomore Year	Spring	
ECO 201N	Principles of Economics, Microeconomics	
or		
ECO 202N	Principles of Economics, Macroeconomics	3
EE 225	Circuits III	4
REE 243	Electrical Power	4
REE 253	Electromechanical Energy Conversions	3
Total		14

Junior Year	Fall	
EE 321	Electronics I	5
MATH 361	Statistical Methods I	4
MECH 318	Fluid Mechanics I	4
	Renewable Energy Engineering elective	3
Total		16

Junior Year	Winter	
EE 343	Solid-State Electronic Devices	3
ENGR 355	Thermodynamics	3
WRI 327	Advanced Technical Writing	3
	Humanities elective	3
	Renewable Energy Engineering elective	3
Total		15

Junior Year	Spring	
MECH 323	Heat Transfer I	3
REE 331	Fuel Cells	3
SPE 321	Small Group and Team Communication	3
	Math/Science elective**	3
	Renewable Energy Engineering elective	3
Total		15

Senior Year	Fall	
EE 419	Power Electronics	4
MECH 433	HVAC	3
REE 339	Senior Project I	2
REE 463	Energy Systems Instrumentation and Control	3
	Renewable Energy Engineering elective	3
Total		15

Senior Year	Winter	
REE 439	Building Energy Auditing and Management	3
REE 412	Photovoltaic Systems	3
REE 449	Senior Project II	2
	Humanities elective	3
	Renewable Energy Engineering elective	3
	Social Science elective	3
Total		17

Senior Year	Spring	
EE 456	Control System Design	4
REE 413	Electric Power Conversions Systems	3
REE 455	Energy-Efficient Building Design	3
REE 459	Senior Project III	2
	Humanities elective	3
Total		15

Renewable Energy Engineering Electives	
EE 347	Digital Logic
REE 344	Nuclear Energy
REE 345	Wind Power
REE 346	Biofuels and Biomass
REE 347	Hydroelectric Power
REE 348	Solar Thermal Energy Systems
REE 307/407	Independent Study/Special Topics
REE 451	Geothermal Energy and Ground-Source Heat Pumps
REE 465	Renewable Energy Transportation Systems

* With advisor approval students may take REE 201 in place of ENGR 101 and ENGR 102.

** Advisor approval required