

Degree Requirements

The Bachelors of Science in Renewable Energy Engineering is a rigorous curriculum that requires 183 credit hours and approximately four years to complete. See the general education requirements for a bachelor's degree listed in the Academic Policies section of the catalog.

Bachelor of Science in Renewable Energy Engineering (2011-2012)

Curriculum

For OIT Portland students only. Required courses and recommended terms during which they should be taken for students transferring into the program with a bachelors of arts, an associates degree and/or sufficient community college transfer credits:

1st Summer Term						Su
MATH 251	Differential Calculus.....					3
Total						10
Sophomore Year Term		F	W	Sp	Su	
EE 221	Circuits I – DC and 1 st Order Transient Analysis.....	4				
CHE 221 [^]	General Chemistry.....	5				
MATH 252	Integral Calculus.....	4				
REE 201	Introduction to Renewable Energy.....	3				
EE 223	Circuits II – AC and 2 nd Order Transient Analysis.....	4				
CHE 222 [^]	General Chemistry.....	5				
MATH 321	Differential Equations.....	4				
PHY 221	General Physics With Calculus.....	4				
EE 225	Circuits III – Laplace Transforms and Applications.....	4				
CHE 260	Electrochemistry.....	4				
PHY 222	General Physics With Calculus.....	4				
REE 243	Electrical Power.....	4				
MATH 254	Vector Calculus.....					4
PHY 223	General Physics With Calculus.....					4
ENGR 211	Statics.....					4
Total		16	17	16		12

Junior Year Term		F	W	Sp	Su
EE 321	Electronics I.....	5			
EE 343	Solid-State Electronic Devices.....	3			
ENGR 355	Thermodynamics.....	3			
	Renewable Energy Engineering Elective.....	3			
ENGR 267	Programming for Engineers.....			3	
MECH 318	Fluid Mechanics.....			4	
REE 412	Photovoltaic Systems.....			3	
	Renewable Energy Engineering Elective.....			3	
SPE 321	Small Group and Team Communication.....			3	
EE 419	Power Electronics.....			4	
MATH 361	Statistical Methods.....			4	
MECH 323	Heat Transfer.....			3	
REE 339	Senior Project I.....			2	
REE 413	Electric Power Conversion Systems.....				3
REE 253	Electromechanical Energy Conversion.....				3
Total	14	16	13	6

Senior Year Term		F	W	Sp
REE 33x	REE 331, 333 or 335.....	3		
REE 463	Energy Systems Instrumentation and Control.....	3		
REE 4xx	Senior Sequence Course I.....	3		
	Renewable Energy Engineering Elective.....	3		
ENGR 407	Senior Project		2	
EE 456	Control Systems Design.....		4	
REE 4xx	Senior Sequence Course II.....		3	
	Renewable Energy Engineering Elective.....		3	
ENGR 407	Senior Project			2
REE 4xx	Senior Sequence Course III.....			3
	Renewable Energy Engineering Elective.....			3
Total		12	12	8

Other courses that may need to be taken:

ECO 201N	Principles of Economics, Microeconomics.....	3
or		
ECO 202N	Principles of Economics, Macroeconomics.....	3
HIST 356	History of Energy.....	3
WRI 327	Advanced Technical Writing.....	3
	Math/Science Elective	3 or 4

^This course is not offered at OIT Portland. It is only available at local community colleges.

Renewable Energy Engineering Electives

REE 331	Fuel Cells*
REE 333	Batteries*
REE 335	Hydrogen*
REE 344	Nuclear Energy
REE 345	Wind Power
REE 346	Biofuels and Biomass
REE 347	Hydroelectric Power
REE 348	Solar Thermal Energy Systems
REE 439	Energy Systems Management & Auditing
REE 451	Geothermal, G-SHP
REE 453	Power Systems Analysis
REE 454	Power Systems Protection & Control
REE 455	Energy Efficient Building Design
REE 465	RE Transportation Systems
MECH 433	HVAC

Any upper-division EE, MECH or CE course, pending advisor approval

*May serve as an electrochemistry elective course