



Master in Renewable Energy and the Environment

Program Curriculum

Course			Required or Selected Elective	College-Level Math and Sciences *	Advanced Technical &/or Science Topics	General Education #
FIRST TERM			--	--	--	--
Department	Course Code	Course Title	--	--	--	--
MED	7161-ME-3	Renewable Energy Systems	Required	--	AT (3)	--
MED	7162-ME-3	Environment And Sustainability	Required	--	ST (3)	--
MED	7163-ME-3	Advanced Heat Transfer	Required	--	AT (3)	--
SECOND TERM			--	--	--	--
MED	7164-ME-3	Solar Energy	Required	--	ST (3)	--
MED	71XX-ME-3	Elective-1 (List-1)	Selected Elective	--	AT (3)	--
MED	71XX-ME-3	Elective-2 (List-2)	Selected Elective	--	ST (3)	--
THIRD TERM			--	--	--	--
MED	71XX-ME-3	Elective-3 (List-3)	Selected Elective	--	AT (3)	--
MED	71XX-ME-3	Elective-4 (List-4)	Selected Elective	--	ST / AT (3)	--
MED	7185-ME-3	Project	Required	--	AT (3)	--
FOURTH TERM			--	--	--	--
MED	71XX-ME-3	Elective-5 (List 4)	Selected Elective	--	AT (3)	--
MED	7185-ME-3	Project Continued	Required	--	AT (3)	--
Overall Total Credit Hours For The Degree			--	0	33	0
Percent of Total			--	0	100%	0

* Criteria of at least 30 Credit hours of Math and Basic Science Courses are required at the Bachelor level as an eligibility requirement for the admission to the program.

There is no General Requirement for the Master Level



Master in Renewable Energy and the Environment – Curriculum Prerequisite & Progression

Program Level	Course Structure & Progression Path	Prerequisite / Requirement
Level 1 Core Semesters	1. 7161-ME-3: Renewable Energy Systems 2. 7162-ME-3: Environment and Sustainability 3. 7163-ME-3: Advanced Heat Transfer	None (NA)
Level 2 Specialization & Core	1. 7164-ME-3: Solar Energy (<i>Required</i>) 2. 71XX-ME-3: Elective-1 (<i>From List 1</i>) 3. 71XX-ME-3: Elective-2 (<i>From List 2</i>)	None (NA)
Progression Gateway	Successful Completion of 18 Credit Hours	18 credit hours must be successfully completed from Levels 1 & 2
Level 3 Advanced Electives & Capstone	1. 71XX-ME-3: Elective-3 (<i>From List 3</i>) 2. 71XX-ME-3: Elective-4 (<i>From List 4</i>) 3. 7185-ME-3: Project (<i>Component 1</i>)	Requires 18 credits completed from Levels 1 & 2
Level 4 Final Semester	1. 71XX-ME-3: Elective-5 (<i>From List 4</i>) 2. 7185-ME-3: Project (<i>Component 2 / Defense</i>)	Continuous enrollment in Project

Program Completion & Graduation Requirements

Requirement	Condition
Master's Project	Successful defense of the Master's Project report and oral presentation
Minimum GPA	Minimum 3.5 overall Cumulative Grade Point Average (CGPA)
Scientific Publication	Submission of at least one scientific paper to a specialized journal or conference, derived from the Master's Project

Total coursework before/through the gateway: 18 credit hours from Levels 1 and 2.

Progression to Level 3: Requires successful completion of those 18 credit hours.

Project: Component 1 begins at Level 3 and Component 2/Defense continues into Level 4.



Master in Renewable Energy and the Environment – List of Selected Elective Courses

List	Course Code	Course Title	Required/ Elective	Pre- Requisite Courses	Credit Hours
List: 1	7166-ME-3	Numerical Methods	Elective	NA	3
	7168-ME-3	Photovoltaic Energy Systems	Elective	NA	3
	7169-ME-3	Geothermal Energy	Elective	NA	3
	7170-ME-3	Advanced Fluid Mechanics	Elective	NA	3
List: 2	7171-ME-3	Wind Energy	Elective	NA	3
	7173-ME-3	Energy Conversion	Elective	NA	3
	7174-ME-3	Energy Storage Systems	Elective	NA	3
	7175-ME-3	Electrical Systems Related To Renewable Energy	Elective	NA	3
List: 3	7165-ME-3	Energy Efficiency	Elective	NA	3
	7172-ME-3	Finite Elements Method	Elective	NA	3
	7177-ME-3	Computational Fluid Dynamics	Elective	NA	3
	7179-ME-3	Advanced Mathematics	Elective	NA	3
List: 4	7180-ME-3	Economic Aspects Of Renewable Energy	Elective	NA	3
	7181-ME-3	Energy Comfort In Buildings	Elective	NA	3
	7182-ME-3	Environmental Pollution	Elective	NA	3
	7183-ME-3	Energy Management	Elective	NA	3
	7184-ME-3	Desalination	Elective	NA	3
	7176-ME-3	Energy Policy, Planning and Sustainable Development	Elective	NA	3