

Renewable Energy Engineering Department

First Year: General Engineering

First Semester (Fall)

No	Code	Course of study	hours		Units	No. of study hours per week
			theoretical	practical		
1	GS 101	Mathematics I	4	-	4	4
2	GS 103	Physics I	3	-	3	3
3	GE104	Computer	3	-	3	3
4	HS 106	Arabic language	2	-	2	2
5	GS 204	Statistics and probability	3	-	3	3
6	GE 103	Mechanics Engineering I	3	-	3	3
Total Units					18	

Second Semester (Spring)

No	Code	Course of study	hours		Units	No. of study hours per week
			theoretical	practical		
1	GS 102	Mathematics II	3	-	3	3
2	GS 104	Physics II	3	3	4	6
3	GS 105	Chemistry	4	-	4	6
4	HS 103	English language	2	-	2	2
5	GE 102	Engineering drawing	1	4	3	5
6	HS 110	National culture	2	-	2	2
Total Units					18	

SECOND YEAR: Renewable Energy Engineering (REE) Department**Third Semester (Fall)**

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Mathematics III	GS 201	GS102	3	2	-	2
2	Material Science	SREE 201	GS105	3	2	3	-
3	Engineering Measurements	SREE 203	NONE	2	1	3	-
4	Engineering Mechanics II	SREE 205	GE103	3	2	-	2
5	Circuit Analysis I	SREE 207	GS104	3	2	3	-
6	Introduction to Energy Science and Technology	SREE 209	GS104	2	1	-	2
Total				16	10	9	6
Total Contact Hours						24	

Fourth Semester (Spring)

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Mathematics IV	GS 202	GS 201	3	2	-	2
2	Thermodynamics I	SREE 202	GS 103	3	2	-	2
3	Computer Programming II	SREE 204	GE 104	3	1	-	4
4	English for Academic Purposes	SREE 206	HS 104	3	3	-	-
5	Circuit Analysis II	SREE 208	SREE 207	3	2	3	-
Total				15	12	3	8
Total Contact Hours						22	

THIRD YEAR: Renewable Energy Engineering (REE) Department**Fifth Semester (Fall)**

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Numerical Analysis	SREE 301	GS202	3	2	-	2
2	Communication Skills	SREE 303	NONE	1	-	-	2
3	Meteorology and Climate	SREE 305	NONE	3	3	-	-
4	Electronics I	SREE 307	SREE 207	3	2	3	-
5	Thermodynamics II	SREE 309	SREE 202	3	2	3	-
6	Fluid Mechanics	SREE 311	SREE 202	4	3	3	-
Total				17	12	9	4
Total Contact Hours						25	

Sixth Semester (Spring)

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Engineering Economics	SREE 302	NONE	3	3	-	-
2	Electrical Machines	SREE 304	SREE 207	3	2	3	-
3	Principle of Power Systems	SREE 306	SREE 208	2	2	-	-
4	Technical Report Writing	SREE 308	NONE	1	-	-	2
5	Heat Transfer	SREE 310	GS202 & SREE 202	3	2	-	2
6	Electronics II	SREE 312	SREE 307	3	2	3	-
Total				15	11	6	4
Total Contact Hours						21	

FOURTH YEAR: Renewable Energy Engineering (REE) Department**Seventh Semester (Fall)**

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Solar Cooling Systems	SREE 401	SREE 309 & SREE 310	3	2	-	2
2	Biomass Energy Systems	SREE 403	SREE 309	3	2	-	2
3	Signals and Systems	SREE 405	GS202 & SREE 207	2	1	-	2
4	Wind Energy Systems	SREE 407	SREE 306 & SREE 311	4	3	-	2
5	Solar PV Systems	SREE 409	SREE 209 & SREE 312	4	3	3	-
Total				16	11	3	8
Total Contact Hours						22	

Eighth Semester (Spring)

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Solar Thermal Energy Systems	SREE 402	SREE 209 & SREE 310	3	3	-	2
2	Power Electronics	SREE 404	SREE 312	3	3	-	-
3	Control Systems	SREE 406	SREE 405	3	2	-	2
4	Thermal Power plants	SREE 408	SREE 310 & SREE 311	3	3	-	-
5	Fuel Cells	SREE 410	GS 105 & SREE 309	3	2	-	2
Total				15	13	-	6
Total Contact Hours						24	

FIFTH YEAR: Renewable Energy Engineering (REE) Department**Ninth Semester (Fall)**

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Project (Part I)	SREE 501	5 th year standing	1	-	-	2
2	SREE Elective Course (1)		See course syllabus	3	3	-	-
3	SREE Elective Course (2)		See course syllabus	3	3	-	-
4	SREE Elective Course (3)		See course syllabus	3	3	-	-
5	SREE Elective Course (4)		See course syllabus	3	3	-	-
Total				13	12	-	2
Total Contact Hours					14		

Tenth Semester (Spring)

S.N	Course Title	Course Code	Prerequisites	Units	Contact Hours		
					L	P	T
1	Project (Part II)	SREE 502	SREE 501	3	-	-	6
2	SREE Elective Course (5)		See course syllabus	3	3	-	-
3	SREE Elective Course (6)		See course syllabus	3	3	-	-
4	SREE Elective Course (7)		See course syllabus	3	3	-	-
Total				12	9	-	6
Total Contact Hours					15		

Elective Courses

S.N	Prerequisites	Course Code	Course Title	Units
1	applied climatology	REE 503	REE 305	3
2	Special Topics in Solar Energy	REE 504	REE 402	3
3	Environmental Engineering	REE 505	REE 305	3
4	(PLC) Programmable Logic Controller	REE 506	REE 406	3

5	Special Topics in Wind Energy	REE 507	REE 407	3
6	Geothermal Energy Systems	REE 508	REE 310	3
7	Energy Storage and Transmission	REE 509	REE 402&REE 407	3
8	Electromagnetic	REE 510	GS104	3
9	Digital Control Systems	REE 511	REE 406	3
10	Design for Energy Efficiency	REE 512	REE407&REE 409	3
11	¹ PV in the Built Environment	REE 513	REE 409	3
12	Passive Solar Building	REE 514	REE 310	3
13	¹ Electric Power Distribution Systems	REE 515	&REE 306	3
14	Hydroelectric Energy Systems	REE 516	REE 311	3
15	Hydroelectric Energy Systems	REE 517	REE 407	3
16	Design of Wind Turbines	REE 518	REE 407	3
17	Instrumentation and Measurements	REE 519	REE 203	3
18	Special Topics in Bio-energy	REE 520	REE 403	3
20	Optoelectronics	REE 521	REE 208	3
21	Random Signal Theory	REE 522	REE 207&GS204	3
22	Desalination Plants	REE 523	REE 311	3
23	¹ Electrical Machines 2	REE 524	REE 304	3
24	Power Electronics 2	REE 524	REE 404	3
25	¹ Sensors and Measurements	REE 526	REE 203&GS104	3
26	¹ Electronic Materials and Devices	REE 527	REE 307	3
