

## 2012 Undergraduate Curriculum for New Energy Science and Engineering (Utilization of Renewable Energy) ( I )

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0000007	College English (Band One)	Exam	4	64	64	0	0	0	4															College of Foreign Languages
0000011	Physical Education -1	General Assessment	1	32	32	0	0	0	1															Department of Physical Education
0001903	Calculus (Engineering) -1	Exam	5.5	99	64	0	0	35	5.5															College of Applied Sciences
0001908	Linear Algebra (Engineering)	Exam	3	54	48	0	0	6	3															College of Applied Sciences
0004312	Modern Chinese History	Exam	2	32	32	0	0	0	2															School of Marxism
0000008	College English (Band Two)	Exam	4	64	64	0	0	0			4													College of Foreign Languages
0000012	Physical Education -2	General Assessment	1	32	32	0	0	0			1													Department of Physical Education
0000072	University Physics I-1	Exam	4	64	64	0	0	0			4													College of Applied Sciences
0001904	Calculus (Engineering) -2	Exam	5.5	99	64	0	0	35			5.5													College of Applied Sciences
0004311	Ethical Conduct and Fundamentals of Law	Exam	3	48	32	0	16	0			3													School of Marxism
0002784	Fundamentals of National Defense	General Assessment	2	32	32	0	0	0				2												Students' Affairs Office
0000009	College English (Band Three)	Exam	4	64	64	0	0	0					4											College of Foreign Languages
0000013	Physical Education -3	General Assessment	1	32	32	0	0	0					1											Department of Physical Education
0000073	University Physics I-2	Exam	4	64	64	0	0	0					4											College of Applied Sciences
0003333	Probability and Statistics (Engineering)	Exam	3	54	50	0	0	4					3											College of Applied Sciences
0006457	Fundamentals of Chinese Sociology	Exam	4	64	48	0	16	0					4											School of Marxism
0000010	College English (Band Four)	Exam	4	64	64	0	0	0							4									College of Foreign Languages
0000014	Physical Education -4	General Assessment	1	32	32	0	0	0							1									Department of Physical Education
0004361	Introduction to Philosophy	Exam	3	48	48	0	0	0							3									School of Marxism
University Requirements		Sub-total	59	1042	930	0	32	80	15.5		17.5	2	16		8									
0000066	Engineering Graphics V	Exam	3	48	48	0	0	0	3															College of Mechanical Engineering and Applied Electronics Technology
0001973	Chemistry and Environment	Exam	2	32	32	0	0	0	2															College of Environmental and Energy Engineering

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0007075	Freshmen Seminar Course	General Assessment	1	16	8	0	8	0	1															College of Environmental and Energy Engineering
0007429	Computer-Aided Design and Auto CAD	General Assessment	2	32	16	0	16	0	2															College of Computer Science
0001931	Engineering Mechanics III	Exam	5.5	88	84	0	0	4					5.5											College of Mechanical Engineering and Applied Electronics Technology
0000106	Electrical Engineering I	Exam	3.5	56	42	14	0	0							3.5									College of Electronic Information and Control Engineering
0002291	Fundamentals of Mechanical Design V	Exam	5	80	72	0	8	0							5									College of Mechanical Engineering and Applied Electronics Technology
0003211	Engineering Thermodynamics II	Exam	3	48	48	0	0	0							3									College of Environmental and Energy Engineering
0004967	Engineering Fluid Mechanics	Exam	3	48	42	6	0	0							3									College of Architecture and Civil Engineering
0000330	Fundamentals of C Programming Language	General Assessment	3	48	32	0	16	0					3											College of Computer Science
0007112	Engineering Materials	Exam	2	32	32	0	0	0									2							College of Materials Science and Engineering
0001901	Electrical Engineering V	Exam	5	80	60	20	0	0									5							College of Electronic Information and Control Engineering
0003210	Heat Transfer IV	Exam	3	48	48	0	0	0									3							College of Environmental and Energy Engineering
0007420	Theory of Automatic Control	General Assessment	2	32	32	0	0	0									2							College of Electronic Information and Control Engineering
0004970	Engineering Combustion	Exam	2	32	28	4	0										2							College of Electronic Information and Control Engineering
Discipline Requirements		Sub-total	45	720	620	44	48	4	8				8.5		14.5		14							
0003796	Laboratory of Chemistry and Environment	General Assessment	0.5	12		12			0.5															College of Environmental and Energy Engineering
0005375	Cognitive Practice	General Assessment	1	30			30		1															College of Environmental and Energy Engineering
0003087	Practices of National Defense	General Assessment	1	30			30					1												Students' Affairs Office
0004748	Machine Shop Training C	General Assessment	4	120			120				4													College of Mechanical Engineering and Applied Electronics Technology
0004964	Physics Laboratory (Engineering) - 1	General Assessment	1	24	2	22					1													College of Applied Sciences
0003389	Practice of Engineering Graphics IV	General Assessment	3	90			90				3													College of Mechanical Engineering and Applied Electronics Technology

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters																Responsible Unit
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII	8		
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0004965	Physics Laboratory (Engineering) - 2	General Assessment	1.5	36		36							1.5											College of Applied Sciences	
0007069	Social Practices	General Assessment	2	48			48									2								School of Marxism	
0001303	Design Course for Mechanical Design I	General Assessment	3	90			90									3								College of Mechanical Engineering and Applied Electronics Technology	
0001212	Fundamental Training on Electrical and Electronics Engineering II	General Assessment	1	30	15	15										1								College of Electronic Information and Control Engineering	
0007409	Professional Practice	General Assessment	4	120			120													4				College of Environmental and Energy Engineering	
0007430	Design for Utilization of Geothermal Energy	General Assessment	2	60			60												2					College of Environmental and Energy Engineering	
0004986	Design for Utilization of Solar Energy	General Assessment	2	60			60														2			College of Environmental and Energy Engineering	
0007431	Thermal Engineering Experiments and Test Technology	General Assessment	1	24			24														1			College of Environmental and Energy Engineering	
0007423	Comprehensive Experiments for New Energy	General Assessment	1	24		24												1						College of Environmental and Energy Engineering	
0005234	Senior Project		16	480			480																16	College of Environmental and Energy Engineering	
Practical Requirements		Sub-total	44	1278	17	109	1152		1.5		8	1	1.5		3	3			3	4	3		16		
Discipline Electives			2	32	32												2								
Major Requirements			12	192	178	8		6									2		7		3				
Major Electives			8	128	118	10											2		4		2				
GEESEM:EM			6	96	96														4		2				
General Education Electives			10	160	160								2				4		2		2				
Electives		Sub-total	38	608	584	18		6					2				10		17		9				
Total for Theoretical Instruction			142	2370	2138	62	80	90	23.5		17.5	2	26.5		22.5		24		17		9				
Total for Practical Instruction			44	1278	17	109	1152		1.5		8	1	1.5		3	3			3	4	3		16		
Innovation Requirements			4	96			96														4				
Total			190	3750	2155	171	1334	90	25		25.5	3	28		25.5	3	24		20	4	16		16		

Notation: GEESEM:EM is the abbreviation for General Education Electives for Science and Engineering Majors: Economics and Management.

2012 Undergraduate Curriculum for New Energy Science and Engineering (Utilization of Renewable Energy) ( II )

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters																Responsible Unit
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII	8		
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0005702	Introduction to Environmental Engineering	General Assessment	2	32	32											2								College of Environmental and Energy Engineering	
0006148	Refrigeration & Air-conditioning System	General Assessment	2	32	32											2								College of Environmental and Energy Engineering	
Discipline Electives		Sub-total	2																						
0006157	Ecnomics of Energy Technology (Self-learning)	General Assessment	2	32	32											2								College of Environmental and Energy Engineering	
0004971	Thermal Process and Equipment	Exam	3	48	48													3						College of Environmental and Energy Engineering	
0004972	Utilization of Solar Energy	Exam	3	48	40	8														3				College of Environmental and Energy Engineering	
0004973	Equipment & Principle of Heat Pump	Exam	2	32	32													2						College of Environmental and Energy Engineering	
0007432	Utilization of Geothermal Energy	Exam	2	32	32													2						College of Environmental and Energy Engineering	
Major Requirements		Sub-total	12	192	184	8																			
0004977	Introduction to Energy Science (Chinese/English)	General Assessment	2	32	32											2								College of Environmental and Energy Engineering	
0004979	Utilization & Transformation of Energy (Chinese/English)	General Assessment	2	32	32													2						College of Environmental and Energy Engineering	
0001589	Automobile Air-Conditioning	General Assessment	2	32	28		4									2								College of Environmental and Energy Engineering	
0004980	Technology & Equipment of Solid Waste Combustion	General Assessment	2	32	32													2						College of Environmental and Energy Engineering	
0004978	Thermal Meter & Auto-Control	Exam	2	32	32													2						College of Environmental and Energy Engineering	
0004975	Utilization of Wind Energy	Exam	2	32	32															2				College of Environmental and Energy Engineering	
0007428	Energy Saving and Emission Reduction	General Assessment	2	32	32															2				College of Environmental and Energy Engineering	
0007433	Utilization of Nuclear Energy	General Assessment	2	32	32													2						College of Environmental and Energy Engineering	
0004976	Fuel Cell	General Assessment	2	32	32															2				College of Environmental and Energy Engineering	
Major Electives		Sub-total	≥8	288	284		4																		

Vice-Director:

Vice-President:

Date:

Date: