

2012 Undergraduate Curriculum for New Energy Science and Engineering (Refrigeration and Air-Conditioning) (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 & Applied Electronics Technology
0001973	Chemistry and Environment	Exam	2	32	32	0	0	0	2																College of Environmental and Energy Engineering

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									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	
0007112	Fundamentals of C Programming Language	General Assessment	3	48	32	0	16	0					3											College of Computer Science	
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	
0000804	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	
Discipline Requirements		Sub-total	43	688	596	40	48	4	8				8.5		14.5		12								
0003796	Laboratory of Chemistry and Environment	General Assessment	0.5	12	0	12	0	0	0.5															College of Environmental and Energy Engineering	
0005375	Cognitive Practice	General Assessment	1	30	0	0	30	0	1															College of Environmental and Energy Engineering	
0004748	Machine Shop Training C	General Assessment	4	120	0	0	120	0			4													College of Mechanical Engineering and Applied Electronics Technology	
0004964	Physics Laboratory (Engineering) - 1	General Assessment	1	24	2	22	0	0			1													College of Applied Sciences	
0003389	Practice of Engineering Graphics IV	General Assessment	3	90	0	0	90	0			3													College of Mechanical Engineering and Applied Electronics Technology	
0003087	Practices of National Defense	General Assessment	1	30	0	0	30	0			1													Students' Affairs Office	
0004965	Physics Laboratory (Engineering) - 2	General Assessment	1.5	36	0	36	0	0					1.5											College of Applied Sciences	

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				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	18 W	3 W	
0001303	Design Course for Mechanical Design I	General Assessment	3	90	0	0	90	0							3									College of Mechanical Engineering and Applied Electronics Technology	
0007069	Social Practices	General Assessment	2	48	0	0	48	0								2								School of Marxism	
0001212	Fundamental Training on Electrical and Electronics Engineering II	General Assessment	1	30	15	15	0	0								1								College of Electronic Information and Control Engineering	
0007423	Thermal Engineering Experiments and Test Technology	General Assessment	1	24	0	24	0	0										1						College of Environmental and Energy Engineering	
0007374	Practice of Production Technology of Refrigeration and Air Conditioning Specialty	General Assessment	3	90	0	0	90	0													3			College of Environmental and Energy Engineering	
0003861	Design for Air-Conditioning System	General Assessment	2	60	0	0	60	0														2		College of Environmental and Energy Engineering	
0007409	Professional Practice	General Assessment	4	120	0	0	120	0														4		College of Environmental and Energy Engineering	
0005234	Senior Project	General Assessment	16	480	0	0	480	0															16	College of Environmental and Energy Engineering	
Practical Requirements		Sub-total	44	1284	17	109	1158	0	1.5		8	1	1.5		3	3	0		1	3	6		16		
Discipline Electives			2	32	32	0	0	0								2									
Major Requirements			14	224	169	16	29	10								7		5		2					
Major Electives			8	128	114	10	4	0										6		2					
GEESEM:EM			6	96	96	0	0	0								2		2		2					
General Education Electives			10	160	160	0	0	0				2				2		6							
Electives		Sub-total	40	640	571	26	33	10					2			13		19		6					
Total for Theoretical Instruction			142	2370	2097	66	113	94	23.5		17.5	2	26.5		22.5		25		19		6				
Total for Practical Instruction			48	1380	17	109	1254	0	1.5		8	1	1.5		3	3			1	3	10		16		
Innovation Requirements			4	96	0	0	96	0													4				
Total			190	3750	2114	175	1367	94	25		25.5	3	28		25.5	3	25		20	3	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 (Refrigeration and Air-Conditioning) (II)

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					
0004970	Engineering Combustion	Exam	2	32	32	0	0	0									2											College of Environmental and Energy Engineering
0004977	Introduction to Energy Science (Chinese/English)	General Assessment	2	32	32	0	0	0									2											College of Environmental and Energy Engineering
0005702	Introduction to Environmental Engineering	General Assessment	2	32	32	0	0	0									2											College of Environmental and Energy Engineering
Discipline Electives		Sub-total	≥2																									
0000595	Refrigeration & Air-Conditioning Compressors I	Exam	3	48	40	8	0	0									3											College of Environmental and Energy Engineering
0000598	Principles and Equipments of Refrigeration	Exam	4	64	56	2	0	6									4											College of Environmental and Energy Engineering
0000580	Principles and Equipments of Air-Conditioning	Exam	3	48	42	2	0	4										3										College of Environmental and Energy Engineering
0007435	Heating, Ventilating, Fluid Transmission and Distribution (Self-learning)	General Assessment	2	32	3	0	29	0										2										College of Environmental and Energy Engineering
0003218	Freezing and Cold Store	Exam	2	32	28	4	0	0																	2			College of Environmental and Energy Engineering
Major Requirements		Sub-total	≥14																									
0000829	Automation of Refrigeration and Air-Conditioning Systems (Chinese/English)	General Assessment	2	32	26	6	0	0											2									College of Environmental and Energy Engineering
0000831	Refrigeration Plant	General Assessment	2	32	32	0	0	0											2									College of Environmental and Energy Engineering
0001589	Automobile Air-Conditioning	General Assessment	2	32	28	4	0	0											2									College of Environmental and Energy Engineering
0007432	Geothermal Energy Utilization	General Assessment	2	32	32	0	0	0											2									College of Environmental and Energy Engineering
0007436	Alternative Fuel for Internal Combustion Engine	General Assessment	2	32	32	0	0	0											2									College of Environmental and Energy Engineering
0002245	New Technology in Refrigeration	General Assessment	2	32	28	0	4	0																	2			College of Environmental and Energy Engineering
0006376	Computer Application in Refrigeration & Air-Conditioning System	General Assessment	2	32	14	0	18	0																	2			College of Environmental and Energy Engineering
0004975	Wind Energy Utilization	General Assessment	2	32	32	0	0	0																	2			College of Environmental and Energy Engineering
0007428	Energy Saving and Emission Reduction	General Assessment	2	32	32	0	0	0																	2			College of Environmental and Energy Engineering
Major Electives		Sub-total	≥8																									

Vice-Director:

Date:

Vice-President:

Date: