Curriculum and Teaching Process for Energy and Power Engineering

Courses Module	Course Name	Course Name	Opening Division	Credits	Total Hours of study	Classroom Teaching	Self-study time	Credits per semester							
								One	II	III	IV	V	VI	VII	VIII
Ideological and political		Ideological and moral cultivation and legal basis	Horse yards	3	90	48	42	3							
		Outline of China's Modern History	Horse yards	3	90	48	42		3						
		Introduction to Mao Zedong Thought and Theory System of Socialism with Chinese Characteristics	Horse yards	5	150	80	70			5					
		Basic principles of Marxism	Horse yards	3	90	48	42				3				
		Situation and policy (1)(2)(3)	Horse yards	2	60	32	28		1		0.5		0.5		
Languages and Tools		College English A(1)(2)(3)	Foreign languages	12	360	192	168	4	4	4					
		College English B(1)(2)(3)	Foreign languages												
		College English C(1)(2)(3)	Foreign languages												
		B of Programming Basis	Computer	5	150	80	70	5							
Comprehensive Literacy		Sports (1)(2)(3)(4)	Sports	7	210	112	98	2	2	2	1				
		Enrolment education	Learning	0.5	15	15	0	0.5							
		Mental health of college students	Operations	1	30	16	14	1							
		Military doctrine and military training	Military	1.5	45	45	0		1.5						
Innovative Entrepreneurship and Employment Guidance		Innovative Entrepreneurship Foundation		2	60	32	28							2	
		Career Planning and Employment Guidance	Operations	1	30	16	14	1							
Energy and Power Characteristics		Energy China	Horse yards	1	30	16	14		1						
		Light of the Silk Road	Foreign languages												
		Introduction to Energy	Ener												

	and Power	gy												
Humanities and Social Sciences	Course Directory of General Elective Courses 2 credits required		2	60	32	28				1			1	
Art Aesthetic	Course Directory of General Elective Courses 2 credits required		2	60	32	28				1			1	
Natural Science	Course Directory of General Elective Courses 2 credits required		2	60	32	28			1	1				
English Extension	Course Directory of General Elective Courses 2 credits required		2	60	32	28				2				
Public basic courses	A of mechanical drawing	Energy	4	120	64	56	4							
	Advanced Mathematics A(1)(2)	Mathematics	15	450	176	274	8	7						
	College Physics B(1)(2)	Mathematics	8	240	96	144		4	4					
	Physical experiments (1)(2)	Mathematics	3	90	48	42		2	1					
	Engineering mechanics	Energy	3	90	48	42		3						
	B of linear algebra	Mathematics	2	60	32	28			2					
	Probability Theory	Mathematics	2	60	32	28			2					
Professional courses	Foundation for Mechanical Design	Energy	3	90	48	42			3					
	Electrical and electronic technology (1)	Telecommunications	3	90	48	42			3					
	Electrical and Electronic Technology (2)	Telecommunications	2	60	32	28				2				
	Calculation method	Mathematics	3	90	32	58				3				
	General chemical B	Ringing	3	90	32	58				3				
	Engineering Thermodynamics	Energy	6	180	64	116				6				
	Computer Network Technology Foundation	Computer	2	60	32	28					2			
	Engineering Combustion Science	Energy	4	120	32	88					4			

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Professional Core Courses (Required)24 credits		Principle of Steam Turbine	Energy	6	180	64	116					6			
		Fluid Dynamics and Pumps and Fans (1)(2)	Energy	9	270	96	174				6	3			
		A of heat transfer	Energy	6	180	64	116					6			
		Boiler Principle	Energy	6	180	64	116						6		
		Thermal Power Plant	Energy	6	180	48	132							6	
		Unit unit centralized operation	Energy	6	180	48	132							6	
Professional elective courses (Public restricted)3 credits		Automatic Control Principle	Automation	4	120	32	88					4			
		Professional English	Energy	2	60	16	44					2			
		Electrical component of power plant	Electrical	4	120	32	88					4			
Professional elective courses		Computer Decentralized Control System	Automation	4	120	32	88						20		
		Thermal Engineering Testing Technology	Energy	4	120	32	88								
		Energy and air pollution control technologies	Energy	2	60	16	44								
		Gas turbines and combined cycles	Energy	4	120	32	88								
		Digital Electro-hydraulic Control Technology and Application	Energy	2	60	16	44								
		Supercritical and ultra supercritical units	Energy	4	120	32	88								
		Principle of Power System Condition Monitoring and Diagnosis	Energy	4	120	32	88								
		Waste heat boiler	Energy	4	120	32	88								
		Renewable energy generation technologies	Energy	2	60	16	44								
		Clean coal technology	Energy	2	60	16	44								
		Air conditioning	Energy	4	120	32	88								
		Introduction to Distributed Energy Systems	Energy	4	120	32	88								
		Thermal network technology	Energy	2	60	16	44								
		Energy management and audit	Energy	4	120	32	88								
		Introduction to Energy Saving Technology	Energy	2	60	16	44								
		Refrigeration Principles and B of Equipment	Energy	4	120	32	88								
		Engineering Training	Training	2	60	40	20		2						

Professional Practice Courses	Basic Course Design for Mechanical Design	Energy	4	120	60	60			4					
	Professional Production Practice	Energy	2	60	40	20				2				
	Design of Steam Turbine Principle Course	Energy	4	120	60	60					4			
	Boiler Principle Course Design	Energy	4	120	60	60						4		
	Thermal Power Plant Course Design	Energy	4	120	60	60							4	
	Simulation Practice	Energy	4	120	60	60								4
	Graduation internship	Energy	8	240	120	120								8
	Graduation Design (thesis)	Energy	25	750	280	470							8	17

Courses Module	Course Name	Course Name	Opening Division	Credits	Total Hours of study	Classroom Teaching	Self-study time	Credits per semester							
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			36	240	7200	3128	4072	28.5	30.5	31	31.5	31	30.5	28	29

Note 1. C》 in College English A》、《 College English B》、《 College English according to the undergraduate English grading test scores of freshmen entering the university