

# Undergraduate Talent Training Program for Electrical Engineering and Automation

(Version number: V2022.03)

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Academic leader: Professor Xiang Fenghong Professional leader: Professor

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## 1. Basic information of majors

School: School of Information and Intelligent Engineering	
Discipline: Engineering	Professional category: Electrical
Professional name :Electrical Engineering and Automation	Professional code: 080601
Duration: 4 years	Degree awarded: Bachelor of Engineering
Total credits of Chinese rules: 176	Total teaching hours: 3124
ECTS: 216	Workload: 6011

## 2. Training objectives

Electrical Engineering and Automation major adheres to the fundamental task of cultivating people with morality, based on Yunnan, serving electric power, facing the major needs of Yunnan, cultivating the all-round development of moral, intellectual, physical, aesthetic and labor, with basic theoretical knowledge of electrical engineering and related professional knowledge with the production, transmission and utilization of electrical energy as the core, with the basic ability to solve electrical engineering technical analysis and control problems, with rich humanistic literacy, strong engineering practice and innovation and entrepreneurship ability, and can be in the fields of electrical engineering, electrical control, and industrial automation. In particular, high-quality application-oriented talents engaged in electrical energy production, power grid operation, power plant monitoring, power supply management, power equipment research and development, power engineering design, installation, operation and maintenance related work in the field of electrical engineering.

Graduates of this major are expected to achieve the following goals in about five years after graduation:

Goal 1: Have excellent ideological and moral character, correct world view, outlook on life and values; Have a good professional ethic.

Goal 2: Have solid knowledge of natural sciences such as mathematics and physics, as well as economics and management required to pursue a career in electrical engineering.

Objective 3: Have the basic theory of electrical engineering, have systematic engineering practice learning experience, and have strong communication, communication skills and understanding skills.

Goal 4: Have solid professional knowledge in the field of electrical engineering and multidisciplinary integration ability, master the latest technology and development status and trend of electrical engineering, be able to solve complex engineering problems related to electrical engineering with the help of modern tools, and have the ability to judge, make decisions and solve problems.

Goal 5: Lifelong learning and self-development capabilities; Expand knowledge and improve capabilities through multiple channels.

### 3. Graduation standards and requirements

#### (1) Graduation standards

Students develop morally, intellectually, physically, aesthetically and labor in an all-round way, complete the study of each teaching link stipulated in this training program, complete a minimum of 216 credits, pass the graduation project (thesis) defense, meet the qualification requirements of the "National Student Physical Health Standards", and meet the relevant provisions of the "Administrative Measures for the Awarding of Bachelor's Degrees of Yunnan University of Economics and Management", and are allowed to graduate and be awarded a bachelor's degree.

1. Complete 65 credits of the general education curriculum system, including at least 14 credits of general education electives;

2. Complete 143 credits of professional education curriculum system, including at least 33 credits of professional education electives;

3. Complete 8 credits of the comprehensive quality education system, including 3 credits for innovation and entrepreneurship practice projects, 3 credits for quality education expansion projects, and 2 credits for social practice;

4. Professional qualification certificate requirements: electrician special operation certificate

#### (2) Graduation requirements

Basic requirements for graduation	Sub-indicator points
<p><b>Graduation requirements 1. Engineering knowledge</b> Ability to apply natural sciences such as mathematics and physics, engineering fundamentals, electrical engineering and related field expertise to solve complex engineering problems in the field of electrical engineering.</p>	<p>1.1 Be able to apply basic knowledge of natural sciences such as mathematics and physics, engineering basic knowledge, electrical engineering and related fields to the appropriate formulation of complex electrical engineering problems; 1.2 Be able to establish appropriate mathematical models for complex engineering problems in electrical engineering and solve them with appropriate boundary conditions; 1.3 Be able to use engineering foundation and professional knowledge for the analysis and optimization of electrical engineering problems, and optimize the solution of electrical engineering problems through model comparison and synthesis.</p>
<p><b>Graduation requirements 2. Problem analysis</b> Apply the basic principles of natural sciences and engineering sciences such as mathematics and physics to identify, express, and analyze complex engineering problems related to electrical engineering through literature research to obtain effective conclusions.</p>	<p>2.1 Be able to use the basic knowledge and scientific methods of mathematics, natural science, and electrical engineering to identify and judge the key links and parameters of complex electrical engineering problems; 2.2 Be able to use the basic knowledge and scientific methods of mathematics, natural sciences, electrical engineering to carry out simulation and simulation, analyze and explore the mechanism and law of the action of key parameters in complex electrical systems, gradually express the solutions to complex electrical engineering problems, and analyze their rationality; 2.3 Be able to recognize that there are many options to solve engineering problems;</p>

Basic requirements for graduation	Sub-indicator points
	2.4 Able to consult and analyze literature to find alternative solutions.
<p><b>Graduation Requirements 3. Design/develop solutions</b> Be able to propose feasible solutions to complex engineering problems in the field of electrical engineering, design electrical modules or systems that meet specific needs and functions, and be able to reflect the sense of innovation in the design process, and evaluate the impact of these solutions and engineering practices on society, health, safety, law, culture, environment and sustainable development.</p>	<p>3.1 Be able to complete the design of electrical modules or subsystems according to specific needs, optimize electrical modules or subsystems, and put forward innovative ideas in the process; 3.2 Be able to study the feasibility of the design scheme through technical and economic evaluation under the constraints of social, health, safety, legal, cultural and environmental factors; 3.3 Be able to calculate process design, system parameters and equipment indicators through model construction; 3.4 Be able to present design results in the form of drawings, reports, calculations or physical objects.</p>
<p><b>Graduation requirements 4. Research</b> Be able to study complex engineering problems in the field of electrical engineering based on scientific principles and scientific methods, be able to design schemes, complete experiments, analyze and interpret data, and obtain reasonable and effective conclusions through comprehensive analysis.</p>	<p>4.1 Be able to study and experimentally verify various physical phenomena related to electrical engineering; 4.2 Be able to choose a research route and design a feasible experimental scheme based on the research objectives and object characteristics; 4.3 Be able to correctly select experimental equipment, carry out experiments safely, and collect experimental data effectively and correctly; 4.4 Be able to correctly collect and organize experimental data, correlate, model, analyze and interpret experimental results, and obtain reasonable and effective conclusions.</p>
<p><b>Graduation requirements 5. Use modern tools</b> Develop, select and use appropriate technologies, resources, modern engineering tools and information technology tools to complete the analysis, prediction and simulation of complex engineering problems for complex engineering problems in the field of electrical engineering.</p>	<p>5.1 Be familiar with the use of instruments, information processing tools, engineering tools and software commonly used in electrical engineering, and understand their scope of application. 5.2 Be able to select and use appropriate, mature and reliable technical solutions for complex electrical engineering problems, and select appropriate instruments and equipment, information processing tools, engineering tools and software for analysis and calculation; 5.3 Be able to use relevant technologies, resources and tools to analyze, predict and simulate complex problems in electrical engineering, and understand their limitations.</p>
<p><b>Graduation requirements 6. Engineering and society</b> Understand the national policies, laws and regulations, technical standards and intellectual property rights related to electrical engineering, be able to rationally analyze complex engineering problems based on professional knowledge, evaluate their impact on society, health, safety, law and culture, and understand the responsibilities they should bear.</p>	<p>6.1 Understand the technical standards, intellectual property rights, industrial policies, laws and regulations and enterprise management systems related to electrical engineering; 6.2 Be able to objectively analyze and evaluate the development of new electrical products, new technologies, new processes and the impact of electrical production on society, health, safety, law and culture, and understand the responsibilities they should bear.</p>
<p><b>Graduation requirements 7. Environment and sustainability</b> Understand the connotation and significance of environmental protection and social sustainable development, and evaluate the impact of complex engineering problems in the field of electrical engineering on</p>	<p>7.1 Understand the relevant laws and regulations of environmental protection, and understand the connotation and significance of environmental protection and sustainable social development; 7.2 Be able to evaluate the impact of environmental pollution, potential hidden dangers, safety precautions and sustainable social development on complex problems in the field of electrical engineering. 7.3 Be able to understand and reasonably evaluate the impact of</p>

<b>Basic requirements for graduation</b>	<b>Sub-indicator points</b>
environmental and social sustainable development.	electrical projects on the environment and sustainable development.
<p><b>Graduation requirements 8. Professional norms</b> Have good morals, good humanities and social science literacy and sense of social responsibility, and be able to understand and abide by professional ethics and norms in the field of electrical engineering, and fulfill responsibilities.</p>	<p>8.1 Have good morals, have a correct worldview, outlook on life and values, and understand the relationship between individuals and society; 8.2 Be able to understand and abide by the professional ethics and norms of honesty, fairness and code in electrical engineering practice; 8.3 Understand the impact of electrical engineering on public safety and health and the social responsibility of environmental protection, and consciously fulfill responsibilities in engineering practice.</p>
<p><b>Graduation requirements 9. Individual and team</b> Organizational, expressive, and interpersonal skills with the ability to take on the role of individual, team member, or leader in a multidisciplinary team.</p>	<p>9.1 Be able to communicate and work together with team members; 9.2 Be able to complete independent tasks in the team and cooperate with other members to complete cooperative tasks; 9.3 Be able to organize, coordinate and direct team members to carry out work in an orderly manner.</p>
<p><b>Graduation requirements 10. Communication</b> Ability to effectively communicate and exchange with industry peers and the public on complex engineering issues in electrical engineering, including writing reports and design drafts, making statements, clearly expressing or responding to instructions; Ability to communicate and communicate in a cross-cultural context.</p>	<p>10.1 Have strong writing skills, and be able to independently write scientific and technological papers, designs and experimental reports on engineering problems and projects of electrical engineering; 10.2 Have certain oral expression and interpersonal skills, and be able to effectively communicate and exchange with industry peers and the public through reports, speeches, defenses, emails and media; 10.3 Have a certain international perspective and be able to communicate and exchange in a cross-cultural context.</p>
<p><b>Graduation requirements 11. Project management</b> Understand and master the principles of engineering management and economic decision-making methods, understand the relationship and impact of electrical engineering and related disciplines, and have the ability to apply it in a multidisciplinary environment.</p>	<p>11.1 Have project management skills and be able to find key factors for project promotion in a complex multidisciplinary environment; 11.2 Have basic knowledge and decision-making ability in engineering management and technical economics, and be able to find reasonable/acceptable solutions in the context of different conflicts of interest.</p>
<p><b>Graduation requirements 12. Lifelong learning</b> Have the awareness of continuous learning, understand the important role of lifelong learning and be able to persevere, and have the ability to continuously learn and adapt to development.</p>	<p>12.1 Be able to recognize the necessity of continuous exploration and learning, and have the awareness of independent learning and lifelong learning; 12.2 Have a knowledge base for lifelong learning, master self-directed learning methods, and understand ways to expand knowledge and abilities; 12.3 Be able to improve yourself through self-directed learning to meet the needs of personal or professional development.</p>

#### 4. Main disciplines, curriculum modules, and core courses

##### (1) Main disciplines

Electrical Engineering, Control Science and Engineering

##### (2) Professional ability modules and core courses

###### 1. Module name

Engineering Basic Module, Professional Basic Module, Professional Core Competency Module, Engineering Practice and Design Module

## 2. Professional core courses

Power electronics technology, electrical engineering, steady-state analysis of power system, transient analysis of power system, principle of relay protection of power system, electrical part of power plant/substation.

## 3. Course modules and supporting courses

Module Name	Support course	Prerequisite courses	Total amount of learning			
			Teaching hours	Total study time	Chinese credits	ECTS
Engineering Fundamentals Module	Advanced Mathematics, University Physics, Linear Algebra, Probability Theory and Mathematical Statistics, Complex Functions and Integral Transformations, Engineering Drawing	/	450	700	25	25
Professional Foundation Module	Fundamentals of analog electronic technology, basic digital electronic technology, circuit theory, engineering electromagnetic field, automatic control theory, electrical engineering CAD technology, sensor technology, Python programming	Advanced Mathematics, University Physics, Complex Functions and Integral Transformations	504	854	27	30.5
Professional core competency modules	Power electronics technology, electrical engineering, steady-state analysis of power system, transient analysis of power system, principle of relay protection of power system, electrical part of power plant/substation, high voltage technology, electrical control and PLC technology, secondary circuit of power plant substation, automatic device of power system, electrical measurement technology, power communication technology, power plant power part	Fundamentals of analog electronics, digital electronics, automatic control theory, circuit theory, electrical engineering, engineering electromagnetic fields, Python programming	621	1169	34.5	48.75
Engineering Practice and Design module	Engineering training, electronic process production, job cognitive practice, electrician training, power system relay protection course design, power system analysis course design, graduation internship, graduation thesis (design).	Fundamentals of analog electronics technology, digital electronics technology, circuit theory, transient analysis of power system, steady-state analysis of power system, principle of relay protection of power system, electrical part of power plant/substation, high	400	1200	20	40

Module Name	Support course	Prerequisite courses	Total amount of learning			
			Teaching hours	Total study time	Chinese credits	ECTS
		voltage technology, electrical control and PLC technology, power electronics technology, electrical engineering.				

### 5. The main practical links of the major

serial number	course	Whether it is compulsory	Main practice projects	Total study time	Number of semesters/weeks	Venue (including off-campus)
1	Circuit theory (1) experiment	be	Kirchhoff's Law, David's Southern's Theorem Verification	28	1 (9 weeks)	Electrical and Electronics Laboratory
2	Circuit theory (2) experiment	be	The three-table method measures the equivalent parameters of the intersection and the three-phase AC circuit experiment	28	2 (9 weeks)	Electrical and Electronics Laboratory
3	University Physics Experiment	be	Use physical pendulum to measure gravitational acceleration, measure wave propagation velocity, magnetic field measurement, Hertz experiment	28	3 (9 weeks)	University Physics Laboratory
4	Basic experiments of analog electronic technology	be	Co-radiation amplification circuit experiment, operational amplifier experiment	28	3 (9 weeks)	Electrical and Electronics Laboratory
5	Basic experiment of digital electronic technology	be	Combine logic circuit experiments, flip-flops, and counter experiments	28	3 (9 weeks)	Electrical and Electronics Laboratory
6	Theoretical experiment of automatic control	be	Control system time domain analysis	28	5 (9 weeks)	Electric power comprehensive simulation laboratory
7	Power electronics technology experiments	be	Three-phase bridge rectifier circuit experiment, SPWM control experiment	28	3 (9 weeks)	Electric power comprehensive simulation laboratory
8	Electrical Engineering Experiments	be	Three-phase transformer experiment, parallel operation experiment of three-phase synchronous generator	28	4 (9 weeks)	Motor Laboratory
9	Experiment on the principle of	be	Current and voltage protection of transmission	28	6 (9 weeks)	Relay Protection

serial number	course	Whether it is compulsory	Main practice projects	Total study time	Number of semesters/weeks	Venue (including off-campus)
	relay protection of power system		lines, transformer differential protection			Laboratory
10	Engineering training	be	Fitter internship, welder internship, machining internship	60	3 (1 week)	Engineering Training Center
11	Electronic craft production	be	Multimeter production	60	3 (1 week)	Electronic Process Laboratory
12	Job cognition internship	be	Power plant internship	60	4 (1 week)	Off-campus internship base
13	Electrician training	be	Electrical Control Technology Practice	60	5 (1 week)	Electrical and Electronics Laboratory
14	Power system relay protection course design	be	110KV transmission line relay protection design	30	7 (1 week)	Intelligent power supply and distribution laboratory
15	Power System Analysis Course Design	be	Power flow calculation, asymmetric short-circuit current calculation, and three-phase short-circuit current calculation for complex power grids	30	7 (1 week)	Intelligent power supply and distribution laboratory
16	Graduation internship	be	—	480	7 (12 weeks). 8 (4 weeks).	Internship base
17	Graduation Thesis (Design)	be	—	420	8 (14 weeks).	On and off campus
	total	—	—	1452	—	—

Remarks: The practical teaching process includes experiment (training), internship, social practice, graduation project (thesis), curriculum design, etc.; The name of the laboratory (training) room or practice base should be clearly written in the place.

## 6. Teaching plan and implementation

### 1. Distribution table for each semester (unit: week)

project	First Academic Year		Second grade		Year 3		Fourth grade		total
	One	Two	Three	Four	Five	Six	Seven	Eight	
Military theory and training	(2)	—	—	—	—	—	—	—	(2)
Curriculum teaching	18	18	18	18	18	18	8	—	116
Graduation internship	—	—	—	—	—	—	12	4	16
Graduation Thesis (Design)	—	—	—	—	—	—	—	14	14
Examination, credit recognition, graduation qualification review	2	2	2	2	2	2	1	1	14
The total number of educational weeks is combined	20	20	20	20	20	20	20	20	160
Winter and summer vacations	5	7	5	7	5	7	5	—	41
Number of school weeks	52		52		52		45		201

### 2. Teaching plan schedule for each semester (see Annex 2)

## **7. Explanation**

1. Talent training mode: The electrical engineering and automation major of our school highlights personality shaping and ability training, builds a talent training system that integrates general education and professional education, science and education, industry and education, ideological and political education and innovation and entrepreneurship education, consolidates the "four modules" of general education, discipline basic education, professional education and practical education, forms a trinity of "personality shaping, knowledge impartation and ability training" talent training model, and comprehensively improves the quality of undergraduate talent training. Highlight the cultivation of students' practical and innovative ability.

2. Curriculum system: Optimize the curriculum system, which is divided into four modules: general education, basic education of disciplines, professional education, and concentrated practical education. Increase the number of elective courses to leave sufficient space for students' independent learning and diversified development. In order to guide students to form a research-based and innovative learning thinking, professional courses are divided into professional core course modules, professional limited course modules and professional optional course modules.

absorb advanced concepts such as "new engineering" and "professional certification" standards, and add engineering drawing and engineering electromagnetic fields to the basic courses of disciplines; Add power system transient analysis to the professional core module; Python programming, power supply technology, and power system microcomputer protection are added to the professional limited courses.

Practical teaching: Practical courses increase the proportion of credit hours, such as university physics, circuit theory, etc. 13 courses have separate experimental courses and credits; Professional core courses such as power system analysis have set up independent credits for course design, focusing on cultivating students' engineering practice ability.

**Annex 2: Teaching plan schedule for each semester**

lesson journey kind other	les son jour ne y sex qualit y	Course name	course encode	ECT S	Total study time	Chin ese credi ts	Total teach ing hour s	Total teaching hours allocation		ETCS credit allocation								
										First Academic Year		Second grade		Third grade		Fourth grade		
										Semest er 1	Semest er 2	Semes ter 3	Fourth semest er	Semes ter 5	Semes ter 6	Semest er 7	Seme ster 8	
										18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 week s	
Ge ner al ed uc ati on pla tfo rm	Ge ner al ed uc ati on pla tfo rm	Ideology, morality and the rule of law	914020016	3	75	3	54	46	8	3								
		Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	914020031	3	75	3	54	46	8	3								
		Fundamentals of Marxism	914021011	3	75	3	54	48	6		3							
		Outline of modern Chinese history	914020007	3	75	3	54	46	8		3							
		Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	914020003	3	75	3	54	48	6			3						
		Situation and policy	914020014	2	50	2	48	48	0	0.3	0.3	0.3	0.3	0.4	0.4			
		University Chinese	911090017	2	50	2	36	36	0		2							
		University Foreign Languages	911090016	12	360	12	216	192	24	4	4	2	2					
		Beauty and Life—(Lady's School/ Junzi Academy)	911090022; 911090021	1	25	1	18	8	10		1							
		Health education for college students	913021011	2	50	2	36	32	4	1	1							
		Military theory and training	913020021	5	148	4	36	36	112	5								
		Collegiate Sports (Clubs)	911070001	5	144	4	144	16	128	1	1	1	2					
		Career planning and employment guidance	913020004	1	25	1	18	8	10		0.3		0.3		0.4			
		Entrepreneurship Education	911082001	2	50	2	36	16	20		1		1					
University Computer Fundamentals	911090018	4	100	4	72	28	44	2	2									
	Take	General education elective courses (including ideological and political optional compulsory courses such as the four histories and excellent traditional Chinese culture).	—	14	350	14	252	252	0					6	6	2		
Cumulative				65	1727	63	1182	906	388	19.3	18.6	6.3	5.6	6.4	6.8	2	0	
ex per t	dis cip lin e	mu st rep	Advanced Mathematics (1)	100060001	5	140	5	90	90	0	5							
			Advanced Mathematics (2)	100060002	5	140	5	90	90	0		5						

lesson journey kind other	lesson journey sex quality	Course name	course encode	ECT S	Total study time	Chin ese credi ts	Total teach ing hour s	Total teaching hours allocation		ETCS credit allocation									
										First Academic Year		Second grade		Third grade		Fourth grade			
										Semest er 1	Semest er 2	Semes ter 3	Fourth semest er	Semes ter 5	Semes ter 6	Semest er 7	Seme ster 8		
										18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks		
kar ma spe tea ch ed uc bas ate e fla t pla tfo rm	e air	linear algebra	100060003	3	84	3	54	54	0		3								
		Probability Theory and Mathematical Statistics	100060004	3	84	3	54	54	0			3							
		complex transform function and integral transformation	100060005	3	84	3	54	54	0			3							
		University Physics	100060006	3	84	3	54	54	0			3							
		University Physics Experiment	100060007	1	28	1	18	0	18			1							
		Circuit Theory (1)	100060008	3	84	3	54	54	0	3									
		Circuit theory (1) experiment	100060009	1	28	1	18	0	18	1									
		Circuit Theory(2)	100060010	3	84	3	54	54	0		3								
		Circuit theory (2) experiment	100060011	1	28	1	18	0	18		1								
		Analog electronics technology basics	100060012	2	56	2	42	42	0			2							
		Basic experiments of analog electronic technology	100060013	1	28	1	18	0	18			1							
		Fundamentals of digital electronic technology	100060014	2	56	2	42	42	0			2							
		Basic experiment of digital electronic technology	100060015	1	28	1	18	0	18			1							
		Engineering drawing	100060016	2	56	2	36	28	8	2									
		Engineering electromagnetic field	100060017	2	56	2	36	36	0				2						
		Automatic control theory	100060018	3	84	3	54	54	0					3					
		Theoretical experiment of automatic control	100060019	1	28	1	18	0	18					1					
		subtotal				45	1260	45	822	706	116	11	12	16	2	4	0	0	0
		spe cia liz ed Core les so ns	mu st rep air	Power electronics technology	100060020	3	84	3	54	54	0			3					
Power electronics technology experiments	100060021			1	28	1	18	0	18			1							
Electrical Engineering	100060022			4.5	126	3	54	54	0				4.5						
Electrical Engineering Experiments	100060023			1.5	42	1	18	0	18				1.5						
Steady-state analysis of power system	100060024			3	84	2	36	36	0				3						
Transient analysis of power system	100060025			3	84	2	36	34	2					3					
Power plant/substation electrical part	100060026			3	84	2	36	36	0						3				

lesson journey kind other	lesson journey sex quality	Course name	course encode	ECT S	Total study time	Chin ese credi ts	Total teach ing hour s	Total teaching hours allocation		ETCS credit allocation								
										First Academic Year		Second grade		Third grade		Fourth grade		
										Semest er 1	Semest er 2	Semes ter 3	Fourth semest er	Semes ter 5	Semes ter 6	Semest er 7	Seme ster 8	
										18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	
		The principle of power system relay protection	100060028	4.5	126	3	54	54	0						4.5			
		Experiment on the principle of relay protection of power system	100060029	1.5	42	1	18	0	18						1.5			
		subtotal		25	700	18	324	268	54	0	0	4	9	6	6	0	0	
Pr ofe ssi on al co nc ent rati on pra cti ce	co mp uls ory	Engineering training	100060030	2	60	1	20	0	20			2						
		Electronic craft production	100060031	2	60	1	20	0	20			2						
		Job cognition internship	100060032	2	60	1	20	0	20				2					
		Electrician training	100060033	2	60	1	20	0	20					2				
		Power system relay protection course design	100060035	1	30	0.5	10	0	10							1		
		Power System Analysis Course Design	100060036	1	30	0.5	10	0	10							1		
		Graduation internship	100300024	16	480	8	160		160								10	6
		Graduation Thesis (Design)	100300025	14	420	7	140		140									14
		subtotal		40	1200	20	400	0	400	0	0	4	2	2	2	10	20	
Pr ofe ssi on al ele ctri ves	Li mit ed/ int erp rofi on ess ion al ele ctri ves	Electrical measurement technology	100060039	2	56	2	36	24	12			2						
		Python programming	100060040	3	84	2	42	42	0				3					
		Python programming experiments	100060041	1.5	42	1	18	0	18				1.5					
		Power communication technology	100060042	3	84	2	36	24	12				3					
		Electrical control and PLC technology	100060043	4.5	126	3	54	54	0				4.5					
		Electrical control and PLC technology experiment	100060044	1.5	42	1	18	0	18				1.5					
		High voltage technology	100060045	3	84	2	36	36	0					3				
		High voltage technology experiment	100060046	0.75	21	0.5	9	0	9					0.75				
		Secondary circuit of the power plant substation	100060047	3	84	2	36	36	0					3				
		Electrical engineering CAD technology	100060049	3	84	2	36	18	18					3				
		Power plant power part	100060051	3	84	2	36	34	2						3			
		Power system automatics	100060052	3	84	2	36	24	12						3			
Sensor technology	100060053	3	84	2	36	24	12						3					
Op		Automation engineering design and application	100060065	4.5	126	3	54	34	20						4.5			

lesson journey kind other	lesson journey sex quality	Course name	course encode	ECT S	Total study time	Chin ese credi ts	Total teach ing hour s	ETCS credit allocation									
								Total teaching hours allocation		First Academic Year		Second grade		Third grade		Fourth grade	
								theo	pract	Semest er 1	Semest er 2	Semes ter 3	Fourth semest er	Semes ter 5	Semes ter 6	Semest er 7	Seme ster 8
								ry	ice	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks
	tion	EDA technical foundation	100060067	3	84	2	36	26	10	3							
		Introduction to Electrical Engineering	100060068	1.5	42	1	18	18	0	1.5							
		Principle and interface technology of monolithic microcomputer	100060069	4.5	126	3	54	42	12			4.5					
		subtotal		33	924	22	396	294	102	1.5	0	2	10	9	10.5	0	0
		Cumulative		143	4084	105	1942	1268	672	12.5	12	26	23	21	18.5	10	20
Compr ehensi ve quality educat ion	co mp uls ory	Innovation and entrepreneurship practice projects	——	3	75	3	(60)		(60)							3	
		Quality education development project	——	3	75	3	(60)		(60)							3	
		Social	——	2	50	2	(36)		(36)							2	
		subtotal	——	8	200	8	(156)		(120)							8	
		total		216	6011	176	3124	2174	1060	31.8	30.6	32.3	28.6	27.4	25.3	20	20

<b>Revision</b>	Director of t h e Teaching a n d Research O f f i c e s i g n	Zheng Yuli	
	Professional l e a d e r s i g n	Qiao Lin	Signed by t h e academic l e a d e r Xiang Fenghong
<b>Review</b>	Vice Dean of Teaching s i g n	Teng Renchao	
	d e a n Signature and date	Li Hongyu	