Undergraduate Talent Training Program for Electrical Engineering and Automation Major （Version: 2023）

I. Program Overview

This program was established in 2009 and is a traditional advantageous and distinctive major at Kunming University. It has been equipped with abundant teaching resources over the years. It features 18 laboratories covering Electrical Engineering, Analog Electronic Technology, Digital Electronic Technology, Principles of Automatic Control, UHV Substation Simulation, Smart Grid, Power-System Relay Protection, Integrated Automation of Power Systems, Power Electronics Technology, Electrical Control and PLC, Electrical Machinery, and other disciplines. There are also 10 off-campus training bases, with on-campus practical training venues spanning over 20,000 square meters. Maintaining long-term sound cooperation with power enterprises across Yunnan Province, the program has cultivated a large number of high-quality, high-level application-oriented engineering talents for relevant industries.

The program currently has 24 full-time teachers, among whom 7 hold doctoral degrees, accounting for 29.17 %; there are 2 professors and 10 associate-senior-title faculty members, with senior-title teachers making up 50 % of the total staff. Graduates of this program are competent for jobs in electrical-engineering-related fields including system operation, automatic control, power electronics technology, information processing, experimental technology, research and development, economic management, as well as the application of electronics and computer technology. They are high-level interdisciplinary engineering-technical talents with broad-ranging professional capabilities. In terms of career prospects, graduates can be engaged in power-system design, commissioning, maintenance and management in power utilities, grid corporations, power plants and other institutions. Meanwhile, driven by the development of new-energy industries, fields such as power electronics and battery energy storage have also become popular employment destinations for graduates from this major.

II. Training Objectives

Tailored to the needs of regional economic and social development, this program fosters high-quality application-oriented engineering-technical talents with all-round development in morality, intelligence, physical fitness, aesthetics and labor competence. Graduates are equipped with sound social and professional ethics as well as comprehensive qualities adaptable to social progress. They master fundamental theories in electrical engineering and core professional

knowledge concerning the generation, transmission and utilization of electric energy. Possessing solid practical capabilities and innovative awareness, graduates are qualified to undertake system design, system analysis, system operation, product research-and-development application, project implementation and management, teaching and scientific research in fields covering electric energy generation, transmission, conversion, control, storage and utilization.

Five years after graduation, students of this program are expected to achieve the following talent training objectives:

Training Objectives	**Objective Connotation**
Objective 1	Able to adapt to the development of modern electrical engineering and automation technology, integrate basic knowledge of mathematics and physics, fundamental engineering knowledge, and specialized expertise in electrical engineering. When confronted with key technical issues arising from system design, system analysis, system operation, product R&D and application, project implementation and management, teaching and scientific-research activities in electrical engineering and relevant fields, graduates can put forward feasible solutions through analysis and judgment and implement them effectively so as to solve complex-engineering-related problems.
Objective 2	Capable of keeping abreast of domestic and international cutting-edge advances in electrical engineering and automation as well as other newly-expanded fields, and applying such advances to engineering practice. Graduates shall possess engineering innovation capability and be proficient in utilizing modern tools to carry out engineering practices within this domain.
Objective 3	Possess values of sustainable development and a strong sense of social responsibility. In engineering practice or research and development, graduates shall understand and abide by professional ethics and norms, comprehensively take into account various non-technical factors such as society, laws and the environment, and effectively apply engineering-technology principles to design efficient holistic engineering solutions.
Objective 4	Fulfill and assume the social responsibilities expected of engineering and technical personnel in their professional careers and specialized activities. Graduates shall proactively enhance and demonstrate sound humanistic and social-science literacy as well as professional ethics. They shall be endowed with competent interpersonal communication and teamwork capabilities, and be capable of delivering complex engineering projects either independently or in collaboration with teams.
Objective 5	Possess global awareness and an international vision with foresight into industry development trends. Graduates can proactively adapt to the ever-changing domestic and international situations and environments, and are equipped with capabilities for self-directed and lifelong learning.

III. Graduation Requirements

Graduation Requirements	Sub-indicators
1. **Engineering Knowledge:** Able to integrate knowledge of mathematics, natural sciences, engineering fundamentals and specialized expertise, and apply such knowledge to solve complex engineering problems in electrical engineering fields including power systems, electric energy conversion and electrical control.	1.1 Capable of applying linguistic tools of mathematics, natural sciences and engineering sciences to formulate problems related to electrical engineering. 1.2 Capable of establishing and solving mathematical models for specific objects in the field of electrical engineering. 1.3 Capable of applying relevant knowledge and mathematical model methods to deduce and analyze complex engineering problems in electrical engineering. 1.4 Capable of adopting relevant knowledge and mathematical model methods to compare and synthesize solution alternatives for complex engineering problems in electrical engineering.
2. **Problem Analysis:** Able to apply fundamental principles of mathematics, natural sciences, engineering fundamentals and specialized knowledge to identify, formulate and analyze complex engineering problems in electrical engineering through literature research, so as to draw valid conclusions.	2.1 Capable of identifying and judging the key links of complex engineering problems in electrical engineering by applying relevant scientific principles. 2.2 Capable of properly formulating complex engineering problems in electrical engineering based on relevant scientific principles and mathematical model methods. 2.3 Capable of recognizing multiple optional solutions to a problem, seeking alternative solutions via literature research, and analyzing influencing factors in the process with fundamental principles and literature references to obtain valid conclusions.
3. **Design/Development of Solutions:** Capable of designing solutions to complex engineering problems in the field of electrical engineering, and designing power systems and component units that meet specific practical requirements. With innovative awareness throughout the design process, graduates can comprehensively consider social, health, safety, legal, cultural and environmental factors in scheme formulation.	3.1 Master the basic design and development methods and technologies covering the full lifecycle and entire process of engineering design and product development, and understand various factors affecting design objectives and technical schemes. 3.2 Capable of completing the design of units and components for complex electrical equipment or power supply and distribution systems in the electrical engineering field, undertaking system or process design, and incorporating innovative awareness into the design work. 3.3 When developing complex equipment or power supply and distribution systems that meet specific requirements, capable of taking into account restrictive factors such as safety, health, legal regulations, culture and environment.
4. Research: Capable of conducting research on complex engineering problems in electrical engineering by adopting scientific methods such as	4.1 Capable of investigating and analyzing solutions to complex engineering problems in electrical engineering through literature research on the basis of scientific principles.

experiment design, data analysis and interpretation based on scientific principles, and drawing reasonable and valid conclusions through comprehensive information integration.	4.2 Capable of selecting research routes and designing experimental schemes according to the characteristics of research objects in the electrical engineering field. 4.3 Capable of constructing experimental systems based on designed schemes, conducting experiments safely and collecting experimental data scientifically. 4.4 Capable of analyzing and interpreting experimental results, and obtaining reasonable and valid conclusions through comprehensive information integration.
5. Usage of Modern Tools: Capable of developing, selecting and applying appropriate technologies, resources, modern engineering tools and information technology tools for complex engineering problems in electrical engineering, including predicting and simulating complex engineering problems, and able to understand the limitations of such tools.	5.1 Understand the working principles and application methods of commonly used information technology tools and engineering tools for electrical engineering and automation, and recognize their limitations. 5.2 Understand the working principles and operation methods of modern instruments and simulation software widely adopted in electrical engineering and automation, and comprehend their limitations. 5.3 Capable of selecting and applying appropriate instruments, information resources, engineering tools and professional simulation software to analyze, calculate and design complex engineering problems in the electrical engineering field. 5.4 Capable of developing or selecting modern tools that meet specific requirements for targeted research objects, simulating and predicting professional problems related to electrical engineering and automation, and analyzing the limitations of the adopted tools.
6. Engineering and Society: Capable of conducting rational analysis based on background knowledge related to electrical engineering, evaluating the impacts of professional engineering practices and solutions to complex engineering problems on society, health, safety, laws and culture, and understanding the corresponding responsibilities.	6.1 Understand the technical standard systems, intellectual property rights, industrial policies, laws and regulations related to the electrical engineering field, and recognize the influences of diverse social cultures on engineering activities. 6.2 Capable of analyzing and evaluating the impacts of electrical engineering practices on society, health, safety, laws and culture, as well as the influences of these restrictive factors on project implementation, and understand the responsibilities to be assumed.
7. **Environment and Sustainable Development:** Capable of understanding and evaluating the impacts of engineering	7.1 Establish a scientific outlook on development, and understand national policies related to environmental protection and the significance of social sustainable

practices addressing complex engineering problems in electrical engineering on environmental and social sustainable development.	development. 7.2 Capable of considering the sustainability of engineering practices in electrical engineering and automation from the perspective of environmental protection and sustainable development, and assessing potential harms and hidden hazards to humans and the environment throughout the product life cycle.
8. **Professional Norms:** Possess humanistic and social science literacy and a strong sense of social responsibility. Able to understand and abide by engineering professional ethics and norms and fulfill corresponding responsibilities in engineering practice.	8.1 Possess solid humanistic and social science literacy. Understand and recognize the core socialist values, gain knowledge of China ' s national conditions, and comprehend the relationship between individuals and society. 8.2 Understand the engineering professional ethics and norms of honesty, impartiality and integrity, and consciously comply with them in electrical engineering practices. 8.3 Understand the social responsibilities of electrical engineers for public safety, health and well-being, as well as environmental protection, and consciously undertake relevant responsibilities in engineering practice.
9. Individuals and Teams: Possess teamwork awareness and be capable of undertaking the roles of individual contributor, team member and team leader within multidisciplinary teams.	9.1 Equipped with interpersonal communication competence and teamwork spirit, and able to communicate and collaborate effectively with members from other disciplines. 9.2 Capable of working independently or collaboratively in multidisciplinary contexts, organizing, coordinating and directing team operations, and serving as both a team member and a team leader.
10. Communication: Capable of communicating effectively with industry peers and the general public on complex engineering problems in the electrical engineering field, including writing reports and design documents, making presentations, and clearly delivering or responding to instructions. Graduates possess a certain international vision and are able to conduct communication and exchanges in cross-cultural contexts.	10.1 Capable of accurately expressing personal viewpoints and responding to questions on professional issues of electrical engineering and automation through oral presentation, written documents, charts and other forms, and understanding the differences in communication with industry peers and the general public. 10.2 Understand the international development trends and research hotspots in the electrical engineering field, and respect the differences and diversity of cultures worldwide. 10.3 Possess oral and written language competencies

	for cross-cultural communication, and able to conduct professional exchanges and communication in cross-cultural environments.
11. Project Management: Understand and master the principles of engineering management and economic decision-making methods, and apply them in multidisciplinary environments.	11.1 Understand the cost composition of electrical engineering projects, and master the management and economic decision-making methods involved in electrical engineering projects. 11.2 Recognize the cost composition of the full lifecycle and entire process of engineering projects and products in the electrical engineering field, and understand relevant issues concerning engineering management and economic decision-making. 11.3 Capable of properly applying engineering management and economic decision-making methods in the process of designing and developing electrical engineering solutions within multidisciplinary contexts.
12. Lifelong Learning: Possess the awareness of independent and lifelong learning, and the ability to take initiative in continuous learning to adapt to the development of society and the electrical engineering discipline.	12.1 Recognize the necessity of continuous learning against the backdrop of social development and establish the awareness of independent and lifelong learning. 12.2 Equipped with independent learning capabilities, including the ability to understand technical problems, summarize experience and raise questions, so as to adapt to the development of society and the electrical engineering industry.

IV. Correlation Matrix of Training Objectives and Graduation Requirements

Graduation Requirements	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5
1: Engineering Knowledge	▲				
2: Problem Analysis	▲				
3: Design/Development of Solutions		▲	▲		
4: Research		▲			
5: Use of Modern Tools		▲			
6: Engineering and Society			▲		

7: Environment and Sustainable Development			▲		
8: Professional Norms			▲	▲	
9. Individuals and Teams				▲	
10. Communication				▲	▲
11. Project Management			▲	▲	
12: Lifelong Learning					▲

Note: Insert '▲' in the intersecting cells of the corresponding graduation requirements and training objectives.

V. Matrix of Correlation between Graduation Requirements and Courses

Course Category	Course Name	Graduation Requirements (1–12)											
		1	2	3	4	5	6	7	8	9	10	11	12
General Compulsory Courses	Ideology, Morality and Rule of Law						H	M	M				
	Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era								H				H
	Outline of Modern Chinese History							M	H				
	Fundamentals of Marxism								M				H
	Introduction to Mao Zedong Thought and Theoretical System of Socialism with Chinese Characteristics								H	M			
	Situation and Policy						M	H	M				
	College English										H		M
	Fundamentals of Information Science		M			M							
	College Physical Education								M	M			
	College Students' Mental Health Education									M	H		
	Innovation and Entrepreneurship Education and Career Planning & Employment Guidance									H	H		
	Military Theory and Training						M		H	L			
Discipline Foundation Compulsory Courses	Advanced Mathematics	H	H										
	Fundamentals of Engineering Drawing	H							M				L
	College Physics	H	M		L								L
	College Physics Experiment				M	M				H			
	Linear Algebra	H			M								L
	Complex Function and Integral Transform	M			M								

	Probability Theory and Mathematical Statistics	M			M								
	C Language Programming			H		M							
	Engineering Electromagnetic Field Theory	M	H							L			
	Discrete Mathematics	M			M								
Professional Education Compulsory Courses	Introduction to Electrical Engineering						M	H					M
	Circuit Principles	H	H		M								
	Analog Electronic Technology	H	H	M	M								
	Digital Electronic Technology	H	H	M	M								
	Principles of Automatic Control	H	H	M		M							
	Power Electronic Technology	H			H	M		L					
	Detection and Conversion Technology	M	H	M									
	Electrical Parts of Power Plants	M						M			H	M	
	Power System Analysis	H	H		H	M							
	Electrical Machinery	M	H		M			L					
	Principle and Application of Single-Chip Microcomputer	M		M									
	Electrical Control and PLC			H	M	M			H				
	Power System Automation		H	M									
	Power System Relay Protection		M	H	H							M	
	High Voltage Technology		M	M				H					
	Professional English for Electrical Engineering						M				H		M
Professional Education Practice	Engineering Training						M			M			
	Professional Cognition Internship						M		M	H	H		
	Literature Retrieval and Scientific Paper Writing										M		M
	Electrical Assembly and Production Training					M			M				
	C Language Programming Course Design			H		M							
	Mathematical Modeling and MATLAB Simulation		H			H							
	Comprehensive Course Design of Electronic Technology			H	L	M							
	Comprehensive Design of Control System Modeling and Simulation		M		M	H							
	Electrical Control and PLC Course Design				M	H				M			
	Configuration Control Technology Training				M	H							M
	Comprehensive Design of Electrical			L		H	M						

Engineering Drawing												
Comprehensive Training of Electrical Engineering					H			M	L	M		
Graduation Internship						M		M	H	H		
Graduation Design			H				H		H	H		M
Labor Education	M	H				M				L		
Thematic Practice on Core Socialist Values	M	H				M				L		

Note: H (High), M (Medium), L (Low) represent the contribution degree of each course to the corresponding graduation requirement.

VI. Main Disciplines and Professional Core Courses

Main Discipline: Electrical Engineering

Professional Core Courses: Circuit Principles, Analog Electronic Technology, Digital Electronic Technology, Automatic Control Principles, Power Electronic Technology, Electrical Parts of Power Plants, Power System Analysis, Electrical Machinery, Electrical Control and PLC, Power System Relay Protection

VII. Length of Schooling and Graduation Requirements

(I) Length of Study

The basic schooling length is 4 years, and the flexible study period ranges from 3 to 8 years.

(II) Graduation Credit Requirements

General Compulsory Courses	General Elective Courses	Discipline Foundation Courses	Professional Compulsory Courses	Extended Elective Courses	Practical Education	Total Credits
43.5	12	31	51	5	22.5	165

(III) Degree Awarding

Graduates who comply with the provisions of the Undergraduate Student Study Management System of Kunming University shall be awarded the Bachelor of Engineering degree.

VIII. Credit and Class Hour Proportion

Course Category	Sub-category	Credits and Class Hours							
		Theory		Practice		Subtotal		Total	
		Credits	Class Hours	Credits	Class Hours	Credits	Class Hours	Credits & Proportion	Class Hours & Proportion
General Education Platform	General Education Compulsory Courses	38.5	704	5	96	43.5	800	57.5 / 34.8%	1056 / 34%
	General Education Elective Courses	10	160	2	32	12	192		
	General Education Practical Courses	0	0	2	64	2	64		
Professional Education Platform	Discipline Foundation Compulsory Courses	28.5	456	2.5	40	31	496	31 / 18.8%	496 / 16%
	Discipline Foundation Elective Courses	—	—	—	—	—	—		
	Professional Education Compulsory Courses	42.5	700	8.5	116	51	816	76.5 / 46.4%	1552 / 50%
	Professional Education Elective Courses	4	70	1	10	5	80		
	Professional Education Practical Courses	0	0	20.5	656	20.5	656		
Total		123.5	2090	41.5	1014	165	3104	100%	100%
Proportion in Total Class Hours (%)		74.8%	67.3%	25.2%	32.7%	100%	100%	—	—

IX. Teaching Progress Schedule

（I） General Education Courses

Course Module	Course Name	Credits	Credit Distribution		Class Hour Distribution	Class Hour Distribution		Weekly Class Hours	Teaching Weeks	Recommended Semester	Assessment Method
			Lecture	Experiment		Lecture	Experiment				
General Education Required Courses	Ideology, Morality and Rule of Law	3	2.5	0.5	48	40	8	3	1-16	1	Exam
	Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	3	2.5	0.5	48	40	8	3	1-16	1-2	Exam
	Outline of Modern Chinese History	3	3	0	48	48	0	3	1-16	2	Exam
	Fundamental Principles of Marxism	3	2.5	0.5	48	40	8	3	1-16	3	Exam
	Introduction to Mao Zedong Thought and Theory of Socialism with Chinese Characteristics	3	2.5	0.5	48	40	8	5	1-16	4	Exam
	Situation and Policy	2	2	0	64	64	0	2	1-16	1-8	Exam
	College English	12	12	0	192	192	0	4	1-16	1-6	Exam

	Basics of Information Science	2	1	1	48	16	32	4	1-16	1-6	Exam
	College P. E.	4	4	0	128	128	0	2	1-16	1-6	Assessment
	College Mental Health Education	2	2	0	32	32	0	2	1-16	1-6	Assessment
	Innovation and Entrepreneurship Education and Career Planning, Employment Guidance	2.5	2.5	0	32	32	0	2	1-16	1-6	Assessment
	Military Theory and Training	4	2	2	64	32	32	2	1-16	1	Assessment
Subtotal		43.5	38.5	5	800	704	96				
General Education Elective Courses	Comprehensive Courses	2	2	0	32	32	0	2	1-16	1-6	Assessment
	Courses of Innovation and Entrepreneurship	2	2	0	32	32	0	2	1-16	1-6	Assessment
	Courses of Public Art	2	2	0	32	32	0	2	1-16	1-6	Assessment
	Courses of Sports and Health	2	2	0	32	32	0	2	1-16	1-6	Assessment
	College Chinese (Compulsory Course)	2	2	0	32	32	0	2	1-16	1-6	Assessment
	Extracurricular Activities	2	2	0	32	32	0				

Subtotal	12	12	0	192	192	0				
Credit Hours for Innovation and Entrepreneurship (2)	Students can obtain corresponding innovation and entrepreneurship practical credits by participating in various innovation and entrepreneurship education and teaching activities at all levels. A minimum of 2 innovation and entrepreneurship practical credits are required during the undergraduate study period. In accordance with the Innovation and Entrepreneurship Credit Recognition Standards of Kunming University, these credits can be converted into general education elective course credits and included in the students' official academic transcripts.									
Credit Hours for Extracurricular Activities(2)	Credits are recognized in accordance with the Implementation Measures for the Recognition of Extracurricular Transcript Credits of Kunming University and included in the students' official academic transcripts.									

（II）Discipline Foundation Required Courses

Course Module	Course Name	Credits	Credit Distribution		Class Hour Distribution	Class Hour Distribution		Weekly Class Hours	Teaching Weeks	Recommended Semester	Assessment Method
			Lecture	Experiment		Lecture	Experiment				
Discipline Basic Required Courses	Advanced Mathematics (1)	6	6	0	96	96	0	6	1-16	1	Exam
	Fundamentals of Engineering Drawing	3	3	0	48	48	0	3	1-16	1	Assessment
	Linear Algebra	2	2	0	32	32	0	2	1-16	2	Exam
	Advanced Mathematics (2)	4	4	0	64	64	0	4	1-16	2	Exam
	College Physics	4	4	0	64	64	0	4	1-16	2	Exam
	College Physics Experiment	1	0	1	16	0	16	1	1-16	2	Assessment
	Discrete mathematics	2	2	0	32	32	0	2	1-16	3	Assessment
	Functions of Complex	2	2	0	32	32	0	2	1-16	3	Exam

	Variable and Integral Transforms										
	Probability and Statistics	2	2	0	32	32	0	2	1-16	3	Exam
	C Language Programming	3	1.5	1.5	48	24	24	3	1-16	3	Assessment
	Engineering Electromagnetic Fields Theory	2	2	0	32	32	0	**2**	1-16	3	Assessment
Subtotal		31	28.5	2.5	496	456	40				

（III）Professional Education

（1）Professional Required Courses

Course Module	Course Name	Credits	Credit Distribution		Class Hour Distribution	Class Hour Distribution		Weekly Class Hours	Teaching Weeks	Recommended Semester	Assessment Method
			Lecture	Experiment		Lecture	Experiment				
Professional Required Courses	Introduction to Electrical Engineering	1	1	0	16	16	0	1	1-16	1	Assessment
	Circuit Principle (1)	4.5	4	0.5	72	64	8	4.5	1-16	2	Exam
	Analog Electronic Technology	3.5	3	0.5	56	48	8	3.5	1-16	3	Exam
	Digital Electronic Technology	3.5	3	0.5	56	48	8	3.5	1-16	4	Exam
	Principle and Application of Microprocessor	3	1	2	48	16	32	3	1-16	4	Assessment
	power electronic	3	2.5	0.5	48	42	6	3	1-16	4	Exam

	technology										
	Electrical Machinery	4. 5	4	0. 5	72	64	8	4. 5	1-16	4	Exam
	Professional English for Electrical Engineering	2	2	0	32	32	0	2	1-16	5	Assessment
	Electrical Systems of Power Plants	3	2. 5	0. 5	48	42	6	3	1-16	5	Assessment
	Power System Analysis	4. 5	4	0. 5	72	64	8	4. 5	1-16	5	Exam
	Automatic Control Theory	3	2. 5	0. 5	48	42	6	3	1-16	5	Exam
	Test and Conversion Technology	2. 5	2	0. 5	40	32	8	2. 5	1-16	5	Assessment
	Electrical control and PLC	4	3. 5	0. 5	64	60	4	4	1-16	6	Exam
	Automatic Techniques in Power System	3	2. 5	0. 5	48	44	4	3	1-16	6	Assessment
	Power System Relaying Protection	4	3. 5	0. 5	64	58	6	4	1-16	6	Exam
	High Voltage Technology	2	1. 5	0. 5	32	28	4	2	1-16	6	Assessment
Subtotal		**51**	**42.5**	**8.5**	**816**	**700**	**116**				
*Notes: 1. Professional core courses are marked with *.2. Two courses, Electrical Parts of Power Plants and Power System Relay Protection, are taught in a project-based teaching mode.*											

（2）Extended Elective Courses

Course Module	Course Name	Credits	Credit Distribution		Class Hour Distribution	Class Hour Distribution		Weekly Class Hours	Teaching Weeks	Recommended Semester	Assessment Method
			Lecture	Experiment		Lecture	Experiment				
Extended	Circuit principle (2)	3	3	0	48	48	0	3	1-16	7	Assessment

Elective Courses	Smart Grid Technology	2	1.5	0.5	32	28	4	2	1-16	6	Assessment
	New energy power generation technology	2	2	0	32	32	0	2	1-16	6	Assessment
	High voltage direct current transmission technology	2	2	0	32	32	0	2	1-16	6	Assessment
	Online monitoring and fault diagnosis of electrical equipment	2	2	0	32	32	0	2	1-16	6	Assessment
	AC/DC Speed Control System	3	2.5	0.5	48	42	6	3	1-16	6	Exam
	Industrial Process Control	3	3	0	48	48	0	3	1-16	6	Assessment
	industrial economy management	2	2	0	32	32	0	2	1-16	3	Assessment
	Application of Artificial Intelligence in Power Systems	2	2	0	32	32	0	2	1-16	6	Assessment
Students shall complete no less than 5 credits of Extended Elective Courses.											

(IV) Practical Education

Course Module	Course Name	Teaching Weeks	Credits	Weekly Class Hours	Recommended Semester	Assessment Method	Remarks

Professional Education Practice	Δ Engineering training	2	1	16	1	Assessment	
	Δ Professional Cognition Practice	1	0.5	16	2	Assessment	
	Literature Retrieval and Writing of Scientific and Technological Papers	1	0.5	16	2	Assessment	
	Electrical Assembly and Production Training	1	0.5	16	2	Assessment	Project-based Teaching
	Course Design of C Language Programming	2	1	16	3	Assessment	Project-based Teaching
	Mathematical Modeling and Matlab Simulation	1	0.5	16	3	Assessment	Project-based Teaching
	Comprehensive Course Design of Electronic Technology	2	1	16	4	Assessment	Project-based Teaching
	Integrated Design of Control System Modeling and Simulation	2	1	16	5	Assessment	Project-based Teaching
	Course Design of Electrical Control and PLC	2	1	16	6	Assessment	Project-based Teaching
	Practical training of configuration control technology	16	0.5	1	6	Assessment	Project-based Teaching
	Comprehensive design of electrical engineering drawing	4	2	16	7	Assessment	Project-based Teaching
	Comprehensive practical training of electrical engineering	4	2	16	7	Assessment	Project-based Teaching
	Δ Graduation Practice	6	3	16	8	Assessment	

	Δ Graduation Design	12	6	16	8	Assessment	
	Labor education	2	1	/	Self-defined	Assessment	
	Theme Practice of Socialist Core Values	2	1	/	1-6	Assessment	
Subtotal			22.5				
Note: School-enterprise co-constructed courses are marked with Δ.							