Professional Master's Degree Program in Energy and Power-Electrical Engineering （for International Students)

I. Discipline Introduction

The discipline of Electrical Engineering at Zhengzhou University of Light Industry (ZZULI) was founded in 1979, and now it is a first-level key discipline in Henan province, a discipline of doctoral program construction, and a characteristic and advantageous discipline of the University. It has the right to grant master's degree in the first level discipline of Electrical Engineering covering the second level disciplines of motor and electrical appliances, power system and automation, power electronics and electrical drive, electrical theory and new technology. At present, there are 35 teachers in this discipline, including 11 professors, 30 doctors. The discipline has one Henan Provincial Key Laboratory of Information Technology, China PROFIBUS / PROFINET technology center and China IEC61131-3 technology training center, Henan Smart Micro-grid International Joint Laboratory, Henan University industrial control network engineering technology center, Henan Key Laboratory of special motor system and control, Power system dynamic simulation laboratory. Graduates have outstanding working ability and excellent comprehensive quality. After graduation, they have studied in a broad and deep-seated way, or worked in universities, scientific research institutes and well-known enterprises.

II. Training Objectives

The program aims to cultivate high-level application research talents who can make outstanding and innovative achievements in this discipline or expertise with good scientific research ethics, rigorous and realistic scientific attitude, broad international vision and strong innovation consciousness, capable of engaging in research, design, management or Engineering and technical work related to electrical engineering.

Brief introduction to China and the Chinese reading & writing are the compulsory courses for international degree students, who are required to be competent to communicate in Chinese when graduate.

III. Research Areas

1. Operation and Control of Power System
2. Electric Machines and Electric Apparatus
3. Power Electronics System and its Control

4. Electrical Theory and New Technology

5. Intelligent Electrical Control System

IV. Academic System, Training Links and Credit Requirements

Academic System：2.5～3 years.

Training Links and Credit Requirements: Total credits≥34, including 24 course credits (6 credits for public degree courses, 12 credits for professional degree courses and no less than 6 credits for non-degree courses) , 5 credits for compulsory courses, 5 credits for practical teaching.

V. Curriculum

Curriculum, Compulsory Links and Credit

Classification	NO.	Name	Period	Credit	Semester
Required Courses	611601	Introduction to China	48	3	2
	611302	Chinese Literacy	48	3	1
	991089	Engineering Ethics	16	1	2
	991007	Numerical Analysis	64	4	1
	991008	Matrix Theory	32	2	1
	011055	Analysis of Modern Power System	32	2	1
	011068	Special Electrical Machine	32	2	1
	011008	Modern Power Electronic Technology	32	2	2
Optional Courses	011199	Energy Utilization Principle and Energy Saving Technology	32	2	2
	011098	Modern Control Theory	32	2	2
	011097	Mathematical Physics Method	32	2	2
	011096	Electric Network Analysis	32	2	2
	011017	Motor Speed Regulation and Control	32	2	2
	011056	New Energy Grid Connected Power Generation Technology	32	2	2
	011004	Fault Diagnosis of Electrical Equipment	32	2	2
	011070	Reliability Technology of Power Equipment	32	2	2

	011009	DSP Device and its Application	32	2	2
	011071	Frontier Topics of Electrical Engineering	16	1	2
	011072	Power Quality and Electromagnetic Compatibility	32	2	2
	011006	Fieldbus Technology and its Application	32	2	2
	011052	Intelligent Detection System and Data Fusion	32	2	2
	011058	Intelligent Instrument Technology	32	2	2
	011073	Theory and Design of Permanent Magnet Motor	32	2	2
	011074	Finite Element Modeling And Analysis of Motor(Experiment Class)	16	1	2
	011075	Dynamic Simulation and Numerical Simulation of Power System（Experiment Class）	16	1	2
	011001	Linear System Theory	32	2	1
	011002	Digital Signal Processing	32	2	1
	011033	Theory and Application Of Nonlinear System	32	2	2
	011012	Modern Sensing Technology and System	32	2	1
	011013	Wavelet Analysis and Application	32	2	2
	011014	Design of Intelligent Instrument	32	2	2
	011003	Intelligent Control	32	2	1
	011026	Electric Network Theory	32	2	2
	011005	Optimal Control Theory and its Application	32	2	1
	011053	Operations Research	32	2	2
Compulsory Courses	991091	Opening Report		1	3
	991095	Innovation And Entrepreneurship		2	1-6
	991093	Academic Activities		1	1-6
	991092	Papers Publishing		1	
Practical Teaching	991096	Professional Practice		4	

VI. **Professional Practice**

Professional practice is an important part of the cultivation of full-time professional degree postgraduates. Sufficient and high-quality professional practice is an important guarantee for the quality of professional degree education. During the semester, full-time professional degree postgraduates must participate in professional practice (past graduates with work experience for more than 6 months and current graduates for more than 12 months). The college will conduct "premise coordination, process management and result assessment" on the professional practice of full-time professional degree postgraduates.

VII. Master's Thesis

a. Basic requirements

Thesis topics should have some theoretical and practical significance. It should have the necessary theoretical analysis and experimental results, and new insights. The author should have solid foundation for the theory and systems expertise, and has the ability to engaged in scientific research or undertake the work of independent expertise.

b. Thesis Work

Master candidates should determine their topics (with academic value) under the guidance of graduate instructors, and then access to thesis work. Thesis work is normally no less than one year. Master candidates should weekly report of their progress to the instructors, and timely complete the work of the corresponding.

1. Proposal

(1)Proposal schedule: Master should determine the topic before the end of the third semester (in particular circumstance this can be done before the end of the fourth semester) after a lot of reading on the background literatures.

(2)The proposal defense: Opening report should be held in the area of research group or wider. Three Associate Professors or experts in the discipline or related field are required to attend this report and give the evaluation result.

(3)Proposal content: Opening Report should meet the requirement of the "Opening Report Form". After the opening report, candidates are required to complete the Opening Report Form", and submit to the Academic Secretary of Graduate School for inspection. If there is any change of the topic for appropriate reasons, Opening Report should be done again with the requirements above.

2. Thesis Writing

The student should finish the thesis either in English or Chinese independently under the advisor's direction. The writing format of the thesis should follow the Style

and Policy Manual for Theses of Zhengzhou University of Light Industry of China.

The application and grading of thesis defense and the degree conference should follow the Regulations for Postgraduate Degree Awarding of Zhengzhou University of Light Industry of China. The defense language can be either English or Chinese.