

## School of Information and Intelligent Science

### NAME OF THE PROGRAM

## Electrical Engineering

电气工程

### RESEARCH DIRECTIONS:

- Power Systems and Intelligent Control 电力系统与智能控制
- Power Electronics and Textile Electrical Systems 电力电子与纺织电气系统
- Theory and New Technology of Electrical Engineering 电工理论与新技术

**TYPE OF THE DEGREE:** Academic Degree

**DEGREE CONFERRED:** Master of Engineering

**SCHOOLING:** 3 years

1. BRIEF INTRODUCTION
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## 1、BRIEF INTRODUCTION

The English-taught Master of Engineering (M.E.) in Electrical Engineering program extensively enrolls and cultivates worldwide master's degree students under the primary discipline of Electrical Engineering, Communication Technology, and Computer Technology. The research fields cover power electronics, electric drive, intelligent control and intelligent automation, pattern recognition, intelligent information sensing and communication engineering, intelligent decision support system, modelling and control of productive process, industrial network, and system integration with database and data warehouse.

## 2、PROGRAM OBJECTIVES

According to the requirements of "facing modernization, the world, and the future" in graduate education, this program aims to cultivate talents master solid basic theories and systematic specialized knowledge in the field of electrical engineering; Familiar with the academic frontiers and current development status of electrical engineering related research directions, possessing the ability to engage in relevant scientific research or independently undertake specialized technical and management work.

## 3、CURRICULUM

1. The 1st & 2nd semesters: courses study
2. November of the 3rd semester: thesis proposal submission and report
3. March of the 6th semester: thesis draft and Pre-defense
4. March of the 6th semester: concealed evaluation on the thesis
5. May of the 6th semester: oral defense on thesis

### Main Courses

1. Modern Mathematical Methods 现代数学方法 (Credit2)
2. Modern Control Theory 现代控制理论 (Credit2)
3. Pattern Recognition: Theory and Technology 模式识别原理与技术 (Credit2)
4. Intelligent Systems and Control 智能系统与控制 (Credit2)
5. Embedded Systems: Theory and Application 嵌入式系统原理与应用 (Credit2)
6. Information Security of Networks 网络信息安全 (Credit2)
7. Data Mining 数据挖掘 (Credit2)

8. Internet of Things 物联网 (Credit2)
9. Information theory and coding 信息论与编码 (Credit2)
10. Electric network analysis 电网络分析 (Credit2)
11. Modern communication technology 现代通信技术 (Credit2)
12. Image Communication and Information Processing 图像通信与信息处理 (Credit2)

### **Requirements for Thesis Work and Publication of Academic Results**

The basic requirements for the topic selection and opening report of the thesis, as well as the basic standards for the level of the thesis, shall be strictly implemented in accordance with the corresponding regulations of the "Donghua University Graduate Work Manual". The specific requirements are as follows:

(1) Thesis topic selection: After completing course studies (credits, degree courses), graduate students, under the guidance of their supervisors, choose topics with important academic and practical value that are closely related to national economic construction and social development. The thesis should have new work and insights.

(2) Opening report: The basic requirement for opening report is to consult a certain amount of literature and materials, including a considerable amount of foreign language materials, conduct research on the project, and write a literature review, provided that the graduate student has completed the required credits and passed the exam. The content of the proposal report must be standardized, including literature review, purpose and significance of the topic selection, working conditions of the paper, research methods and approaches, research objectives, and existing problems. It should be accompanied by a list of literature references, abstracts of each literature, and the review opinions of the supervisor. When there is a significant difference between the research content of the thesis and the opening report, it is necessary to reopen the topic.

(3) The basic criteria for a thesis: The research field covered by the thesis should conform to the direction of electrical engineering or related disciplines, and it should be completed independently in at least one year. The thesis should have new work and insights, have certain theoretical significance in academia or practical value in application.

Basic requirements for publishing a thesis: The research field involved in the thesis should conform to the direction of electrical engineering or related disciplines, and it should be completed independently in at least one year. The paper should have new work and insights, have certain theoretical significance in academia or practical value in application. Basic requirements for publishing papers: Before applying for a degree, master's students must obtain a total score of no less than 4 points related to the research topic of the discipline, and at least 1 academic paper must be publicly published.

## 4、SUPERVISOR INFORMATION



**Prof. Dr.** 张义红 Zhang Yihong

**Research Area:** PLC, Image processing, Sensor network, Automatic control method, The internet of the things method and application, Software engineering management

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**Prof. Dr.** 张光林 Zhang Guanglin

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**Prof. Dr.** 蒋学芹 Jiang Xueqin

**Research Area:** communication systems, Channel coding

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索婧慧 Suo Jinghui

**Research Area:** Complex network, analysis and control of switching system, event triggering control

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**Associate Professor:** 李大威 Dawei Li

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潘峰 panfeng

**Research Area:** Embedded system and embedded AI applications, computational complexity and Kolmogorov complexity

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陆康迪 Lu Kangdi

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曹誉文 Cao Yuwen

**Research area:** High frequency millimeter wave communication perception technology for 6G; Intelligent network control and management; Machine learning algorithms.

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**Associate Professor:** 许武军 Xu Wujun

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