**电气工程及其自动化（专升本）专业人才培养方案**

**Undergraduate Program for the Major of Electrical Engineering and Automation**

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1. **专业简介(Brief Introduction to the Major)**

西南科技大学电气工程及其自动化专业源自自动化专业中的电气工程方向，2009年开始招生。本专业强调强电和弱电并重，软件和硬件兼备，元件和系统结合，充分利用产学研联合办学的体制优势和地域优势，与董事单位在实习基地建设、设备共享、学术交流和科学研究等方面，形成了长期的合作关系，依托科技竞赛平台和实验室资源，着力培养学生的工程应用能力。

Originated from the electrical engineering direction of the automation specialty, the electrical engineering and automation specialty of Southwest University of Science and Technology began to recruit students in 2009. This specialty put equal emphasis on heavy current and weak current, embodies hardware and software capabilities, and combines components and systems. By making full use of the institutional and regional advantages of industry-university-research cooperation, this specialty have formed a long-term cooperative relationship with directors’ unit in the aspects of practice base construction, equipment sharing, academic exchange and scientific research, etc. Relying on the science and technology competition platform and laboratory resources, the specialty have focused on training students' engineering application ability.

1. **培养目标(Education Objectives)**

本专业培养能够综合运用自然科学、工程科学的基础理论与专业知识，分析和解决电气工程及其自动化专业领域的复杂工程问题，具备在电气工程及其相关领域进行科学研究、技术开发、系统运行、工程设计、项目管理等方面的工作能力，能在团队中进行有效交流与合作，具有较高的思想政治素质、社会责任感、职业道德、创新意识和善于学习的复合型高层次人才。毕业五年后达到以下目标：

1. 职业素养：具有较高的思想素质和法律伦理水平，能够在工程实践中遵守职业规范，履行社会责任；

2. 专业能力：能够综合运用系统的科学技术知识，分析和解决电气工程及其自动化领域的复杂工程问题；

3. 交流合作：具有一定的领导能力，能与同行、客户和公众有效沟通，适应团队工作环境，有全球化意识和一定的国际视野；

4. 终身学习：具有终身学习能力，通过不断学习，实现工作能力的自我提升。

The specialty aims at bringing up high-level inter-disciplinary talents, who are able to comprehensively utilize the basic theory and professional knowledge of natural science and engineering science, analyze and solve complex engineering problems in electrical engineering and its automation fields, and have the ability to carry out scientific research, technology development, system operation, engineering design, project management and other aspects in electrical engineering and related fields. They should also possess the following qualities: tbe able to communicate and cooperate effectively in the team, have high ideological and political quality, social responsibility, professional ethics, innovative consciousness and be good at learning. After 5 years of graduation, they should reach the following targets:

1. Professional quality: possess high ideological quality and legal ethics, enable to comply with professional norms and fulfill social responsibilities in engineering practice.

2. Professional competence: capable of comprehensively applying systematic scientific techniques and knowledges to analyze and solve complicated problem in the domain of electrical engineering and related automatic area.

3. Communication and cooperation: embody certain leadership ability, have the ability to communicate effectively with peers, clients and publics, and able to adapt to the work environment of the team, have globalization consciousness and certain international vision.

4. Lifelong learning: possess the ability of lifelong learning, and achieve self-improvement of working ability through continuous study

1. **毕业要求(Graduation Requirements)**

毕业生应获得以下几方面的知识和能力：

**1. 工程知识：** 能够用科学的语言描述工程问题，并用于电力系统和建筑电气的设计、分析和优化

**2. 问题分析：**能够识别和表达电气工程问题中涉及的原理结构、控制保护、设备选择等环节，并能根据电气工程问题的要求，通过文献调研，得到解决问题的总体思路和方案。

**3. 设计/开发解决方案**：能够遵循工程设计流程，合理选择方案，设计出满足指标要求、符合国家相关技术标准和规范的电力系统和建筑电气系统，并能够在设计环节中体现创新意识，同时考虑社会、健康、安全、法律、文化以及环境等因素。

**4. 研究：** 能够理解或提出电力系统、建筑电气系统的实验目标，基于科学原理设计、实施实验，并对实验结果进行分析，通过信息综合得到合理有效的结论。

**5. 使用现代工具：** 能够合理选择相关技术、资源、编程语言、仿真工具，解决电气工程及其自动化领域的工程问题或者对其进行辅助设计、预测模拟，并能够理解其局限性。

**6. 工程与社会：**能够基于工程相关背景知识进行合理分析，评价电气工程及其自动化专业领域的工程实践和复杂工程问题解决方案对社会、健康、安全、法律以及文化的影响，并理解应承担的责任。

**7. 环境和可持续发展：**能够理解和评价电气工程及其自动化专业领域的工程实践对环境、社会可持续发展的影响。

**8. 职业规范：**具有人文社会科学素养、社会责任感，能够在电气工程及其自动化专业领域的工程实践中理解并遵守工程职业道德和规范，履行责任。

**9. 个人和团体：**能够在多学科背景下的团体中承担个体、团队成员以及负责人的角色。

**10. 沟通：**能够就电气工程及其自动化专业领域的复杂工程问题与同行及公众进行有效沟通和交流，包括撰写报告和设计文稿、陈述发言、清晰表达或回应指令。能够在跨文化背景下进行沟通和交流。

**11. 项目管理：**理解并掌握工程管理原理与经济决策方法，并能在多学科环境中应用。

**12. 终身学习：**具有自主学习和终身学习的意识，有不断学习和适应发展的能力。

The graduates should acquire the following knowledge and abilities:

**1. Engineering knowledge:** be able to describe engineering problems in scientific language, and be used for the design, analysis and optimization of electrical system and building electricity.

**2. Problem analysis:** be able to identify and express the principle structure, control protection, equipment selection and other links involved in electrical engineering problems, and get the overall idea and solution to the electrical engineering problem through literature research, according to the requirements,

**3. Design/development solution:** be able to follow the engineering design process and choose the solution reasonably, design the power system and building electrical system to meet the specific requirements of indicators and conform to the relevant national technical standards and norms; be able to reflect the sense of innovation in the design process, as well as to consider the social, health, safety, legal, cultural and environmental factors.

**4. Research:** be able to understand or propose experimental objectives of the power system and building electrical system, design and implement experiments based on scientific principles, analyze experimental results, and obtain reasonable and effective conclusions through information synthesis

**5. Usage of modern tools:** be able to select appropriate technologies, resources, programming languages and simulation tools to solve engineering problems in the field of electrical engineering and its automation area or to assist in design, prediction and simulation, and capable of understanding their limitations

**6. Engineering and society:** able to make rational analysis based on engineering-related background knowledge, evaluate the impact of engineering practice and complex engineering problem solution in electrical engineering and its automation area on society, health, safety, law and culture, and understand the responsibilities

**7. Environment and sustainable development:** able to understand and evaluate the impact of engineering practices in the field of electrical engineering and its automation area on environmental and social sustainable development

**8. Professional norms:** possessing humanistic and social science literacy and social responsibility, able to understand and comply with engineering professional ethics and standards and fulfill responsibilities in the engineering practice in the field of electrical engineering and its automation area

**9. Individuals and teams:** able to assume the roles of individual, team member, and leader in a multi-disciplinary group.

**10. Communication:** able to effectively communicate and exchange with peers and the public on complex engineering issues in the professional field of electrical engineering and its automation area, including writing reports and design drafts, making presentations, and clearly expressing or responding to instructions. Able to communicate and exchange in a cross-cultural context.

**11. Project management:** understanding and mastering the engineering management principles and economic decision-making methods so as to apply them in a multi-disciplinary environment

**12. Lifelong study:** having the consciousness of self-learning and lifelong learning, as well as the ability of continuous learning and adaptive development。

1. **培养目标实现矩阵（毕业要求与课程的对应矩阵）**

**Matrix of Realization of Educational Objectives (The Corresponding Matrix of Requirements for Graduation and Courses)**

| **毕业要求**  **Requirements for Graduation** | **指标点（知识与能力要求）**  **Key Index (Knowledge and Capability Requirements)** | **支撑课程或培养环节**  **Realization** |
| --- | --- | --- |
| 1.工程知识  Engineering knowledge | 1.1 能够用数学、自然科学的语言对工程问题进行初步描述。  1.1 Be able to preliminarily describe engineering problems in the language of mathematics and natural science | 高等数学、概率论与数理统计、线性代数、大学物理 |
| 1.2能够将工程基础知识应用于工程问题的建模、计算与分析。  1.2 Be able to apply basic engineering knowledge to model, calculation and analysis of engineering problem | 电路分析基础、模拟电子技术、数字电子技术、信号与系统 |
| 1.3能够将专业基础知识应用于电力系统和建筑电气的设计、分析和优化。  1.3 Be able to apply basic professional knowledge to design,analysis and optimization of electrical system and building electricity | 自动控制理论、电力电子技术、电机学、电力系统分析、供配电系统 |
| 2. 问题分析  Problem analysis | 2.1能够应用数学、自然科学的基本原理，制订解决电气工程问题的思路和方法，得到系统的原理结构图。  2.1 Be able to apply the basic principles of mathematics and natural science to formulate ideas and methods for solving electrical engineering problems, as well as to get the system principle structure diagram | 复变函数与积分变换、电路分析基础、模拟电子技术、数字电子技术 |
| 2.2能够识别系统的组成部分并分析各环节的作用，会分析系统性能及其影响因素。  2.2 Be able to identify the components of the system and analyze the role of each link, as well as to analyze the system performance and its influencing factors. | 电力电子技术、电机学、自动控制理论、信号与系统、计算机原理及应用 |
| 2.3能够根据系统的要求，综合考虑可行性和经济性，得到解决问题的总体思路和方案。  2.3 Be able to get the overall idea and solution according to the requirements of the system, comprehensively combining feasibility and economical efficiency | 电气工程及其自动化专业综合设计、电气工程及其自动化专业毕业设计、电气工程及其自动化专业生产实习 |
| 3.设计/开发解决方案  Design/development solution | 3.1能够根据指标要求，完成系统总体方案和单元电路的设计。  3.1 Be able to design the overall scheme of the system and the design of the unit circuit according to index requirements | 电气控制与PLC、电子技术课程设计、电力电子课程设计 |
| 3.2能够根据国家相关技术标准和规范，选择合理化解决方案。  3.2 Be able to choose reasonable solution according to relevant national technical standards and specifications. | 电力系统分析、供配电系统、电力系统继电保护（建筑智能化系统）、电力系统的计算机辅助分析（建筑电气工程设计基础） |
| 3.3能够对系统设计方案的合理性进行论证，并在此过程中体现创新意识。  3.3 be able to demonstrate the rationality of the system design scheme, and reflect the innovative consciousness in the process. | 电力系统课程设计（供配电系统课程设计）、电气工程及其自动化专业综合设计、电气工程及其自动化专业毕业设计 |
| 3.4能够在设计环节考虑社会、健康、安全、法律、文化和环境等因素。  3.4 Be able to consider social, health, safety, legal, cultural and environmental factors in the design process. | 思想道德修养与法律基础、形势与政策 |
| 4.研究  Research | 4.1能够理解或提出实验目标，设计并实施实验，对自然科学、电路、电子元器件等相关的物理现象、电气特性进行研究和实验分析。  4.1 have the ability to understand or propose experimental objectives, design and implement experiments, study and analyze physical phenomena and electrical characteristics related to natural sciences, circuits, electronic components, etc. | 电子技术课程设计、大学物理实验、电路分析基础实验、模拟电子技术实验、数字电子技术实验 |
| 4.2能够基于科学原理并采用科学方法对控制系统、电力系统及建筑电气系统制定实验方案并实施，以获取实验数据。  4.2 Be able to develop and implement experimental plans for control system, power system and building electrical system based on scientific principles and methods to obtain experimental data. | 计算机原理及应用实验、电气控制与PLC实验、专业方向实验1（专业方向实验2） |
| 4.3能够分析和解释实验数据，并通过信息综合得到系统优化等合理有效的结论。  4.3 Be able to analyze and interpret experimental data and get reasonable and effective conclusions of system optimization through information synthesis. | 概率论与数理统计、电力电子课程设计、电力系统课程设计（供配电系统课程设计）、电气工程及其自动化专业毕业设计 |
| 5.使用现代工具  Usage of modern tools | 5.1能够理解相关技术、资源、编程工具等的作用、功能，认知其适用场合。  5.1 understand the functions and functions of related technologies, resources, programming tools, etc, and where they apply | 电力系统继电保护（建筑智能化系统）、电力系统的计算机辅助分析（建筑电气工程设计基础） |
| 5.2掌握一门程序设计语言，并能加以利用，以解决电气工程领域的实际问题。  5.2 Master a programming language and be able to use it to solve practical problems in the field of electrical engineering. | 电气控制与PLC、计算机原理及应用、程序设计基础（C语言） |
| 5.3能够使用恰当的仿真工具或工程工具对电气工程及其自动化领域中的复杂工程问题进行辅助设计、预测和模拟，并能理解其局限性。  5.3 be able to design, predict and simulate complex engineering problems in electrical engineering and its automation field using appropriate simulation tools or engineering tools, and understand their limitations. | 模拟电子技术实验、数字电子技术实验、专业方向实验1（专业方向实验2） |
| 6.工程与社会  Engineering and society | 6.1能够认知和解释电气工程及其自动化专业相关的知识产权、产业政策和法律法规，理解不同社会文化的差异。  6.1 Be able to understand and explain intellectual property, industrial policy, laws and regulations related to electrical engineering and automation, and understand the differences of different social cultures. | 入学教育、思想道德修养与法律基础、形势与政策 |
| 6.2能够理解工程技术人员在专业工程实践中应承担的社会责任；能够评价专业工程实践对社会、健康、安全、法律以及文化的影响。  6.2 Be able to understand the social responsibility of engineering technicians in professional engineering practice and automation system; have the ability to evaluate the impact of professional engineering practices and automated systems on society, health, safety, law, and culture. | 电气工程及其自动化专业生产实习、电气工程及其自动化专业毕业实习 |
| 7.环境和可持续发展  Environment and sustainable development | 7.1能够认知环境保护和社会可持续发展的内涵和意义，并在实习、社会实践等项目中践行。  7.1 Be able to understand the connotation and significance of environmental protection and social sustainable development, and practice in internship, social practice and other projects. | 入学教育、电气工程及其自动化专业认识实习、电气工程及其自动化专业生产实习 |
| 7.2能够评价电气工程及其自动化专业领域的工程应用对环境、社会可持续发展的影响。  7.2 Be able to evaluate the impact of electrical engineering and automation applications on environmental and social sustainability | 电气工程及其自动化专业毕业实习、电气工程及其自动化专业生产实习 |
| 8.职业规范  Professional norms | 8.1具有人文社会科学素养，能够形成正确的世界观、人生观和价值观。  8.1 Possess humanistic, social science literacy, and be able to form correct overlooks on the world, life and values | 中国近现代史纲要、毛泽东思想与中国特色社会主义理论体系概论、马克思主义基本原理概论 |
| 8.2具有健康的身体和心理，具备履行社会责任的基础。  8.2 Have a healthy body and mind, have the foundation to fulfill the social responsibility | 体育项目、运动基础、军事理论、大学生心理健康教育 |
| 8.3能够在电气领域的工程实践中理解并遵守工程职业道德和规范，履行责任。  8.3 Be able to understand and follow engineering ethics and codes as well as to fullfil responsibilities in electrical engineering practice. | 思想道德修养与法律基础  思想政治理论课实践教学 |
| 9.个人和团体  Individuals and teams | 9.1具备良好的团队协作意识，能够与其他学科成员协作互补。  9.1 posseess with good teamwork spirit, be able to cooperate with other discipline members. | 军事理论、军事技能训练、工程训练、思想政治理论课实践教学 |
| 9.2能够独立完成团队分配的工作，胜任团队成员的角色，组织团队成员开展工作。  9.2 Be able to complete the assigned work independently, be competent to play the role of team members, and organize team members to carry out work. | 工程训练、电力电子技术课程设计、电气工程及其自动化专业综合设计、电气工程及其自动化专业毕业实习 |
| 10.沟通  Communication | 10.1能够就就电气工程及其自动化专业领域的复杂工程问题，通过文稿、图表、口头表达等方式进行表达，回应质疑，与业界同行及社会公众进行有效沟通和交流。  10.1 Be able to express complex engineering problems in the field of electrical engineering and its related automation area through manuscripts, charts, oral expression, etc., have the ability to respond to questions, and communicate effectively with industry peers and the public. | 电力电子技术课程设计、电力系统课程设计（供配电系统课程设计）、电气工程及其自动化专业毕业设计、电子技术课程设计 |
| 10.2能够阅读外文文献资料，在跨文化背景下进行沟通和交流，具备一定的国际视野。  10.2 Be able to read foreign literature, communicate and exchange in cross-cultural context, possess a certain international perspective. | 综合外语 |
| 11.项目管理  Project management | 11.1理解电气领域工程活动涉及的重要经济与管理因素。  11.1 Understand the important economic and management factors involved in engineering activities in the electric field | 马克思主义基本原理概论、工程训练、电气工程及其自动化专业生产实习 |
| 11.2具备在多学科环境中对工程问题进行经济分析、决策和管理的能力。  11.2 Be able to conduct economic analysis, decision-making and management of engineering problems in a multidisciplinary environment. | 电气工程及其自动化专业综合设计、电气工程及其自动化专业毕业设计 |
| 12.终身学习  Lifelong study | 12.1能认识不断探索和学习的必要性，具备自主学习和终身学习的意识。  12.1 understand the necessity of continuous exploration and learning, have the awareness of independent learning and lifelong learning. | 马克思主义基本原理概论、毛泽东思想与中国特色社会主义理论体系概论 |
| 12.2能够通过学习不断提高，适应工程技术的发展，适应社会竞争与合作。  12.2 have the ability to improve through learning, adapt to the development of engineering technology, adapt to social competition and cooperation. | 电子技术课程设计、电气工程及其自动化专业毕业实习、电气工程及其自动化专业毕业设计 |

**五、教学进程计划表（Courses Schedule for the Major）**

| 序号No. | 课程编号Course Code | 课程名称  Course Name | | | 学分Credits | 学时Hours | | | 开课学期Semester | 学位课Diploma Course | 辅修Minor | 双学位Double Degree |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 总学时  Total | 理论学时Class | 实践学时Practice |
| **学科（大类）教育平台（必修）**  **Discipline Coureses (Required)** | | | | | | | | | | | | |
| 1 | LX190020 | 概率论与数理统计  Probability and Mathematical Statistics | | | 3 | 48 | 48 | 0 | 5 |  |  |  |
| 小计  Subtotal | | | | | 3 |  |  |  |  |  |  |  |
| **专业教育平台（必修）**  **Major Courses (Required)** | | | | | | | | | | | | |
| 1 | XX160880 | | 数字电子技术  Digital Electronic Technology | | 3.5 | 56 | 56 | 0 | 5 |  |  |  |
| 2 | XX161740 | | 数字电子技术实验A  Digital Electronic Technological Experiment A | | 1 | 16 | 0 | 16 | 5 |  |  |  |
| 3 | XX160032 | | 电路分析基础A2  Circuit Analysis Fundamentals A2 | | 2 | 32 | 32 | 0 | 5 |  |  |  |
| 4 | XX160610 | | 计算机原理及应用  Computer Principles and Applications | | 3 | 48 | 48 | 0 | 5 |  |  |  |
| 5 | XX160620 | | 计算机原理及应用实验  Experiments of Computer Principles and Applications | | 0.5 | 8 | 0 | 8 | 5 |  |  |  |
| 6 | XX191100 | | 自动控制理论  Automatic Control Theory | | 3 | 48 | 40 | 8 | 5 | ★ |  |  |
| 7 | XX161560 | | 电力电子技术A  Power Electronic Technology A | | 3 | 48 | 40 | 8 | 5 | ★ |  |  |
| 8 | XX190240 | | 电力电子技术课程设计  Course Design of Power Electronic Technology | | 2 | 32 | 0 | 32 | 5 |  |  |  |
| 9 | XX161610 | | 供配电系统  Power Supply and Distribution System | | 3 | 48 | 40 | 8 | 5 | ★ |  |  |
| 10 | XX161970 | | 电机学  Electrical Machinery | | 4.5 | 72 | 64 | 8 | 6 |  |  |  |
| 11 | XX161180 | | 信号与系统D  Signals and Systems D | | 2 | 32 | 32 | 0 | 6 |  |  |  |
| 12 | XX160250 | | 电力系统分析  Power System Analysis | | 3.5 | 56 | 56 | 0 | 6 | ★ |  |  |
| 13 | XX190300 | | 电气控制与PLC  Electrical Control and PLC | | 2 | 32 | 32 | 0 | 6 |  |  |  |
| 14 | XX190310 | | 电气控制与PLC实验  Experiments of Electrical Control and PLC | | 1 | 16 | 0 | 16 | 6 |  |  |  |
| 15 | XX160350 | | 电气工程及其自动化专业生产实习  Production Practice of Electrical Engineering and Automation | | 2 | 2周 | 0 | 2周 | 6 |  |  |  |
| 16 | XX160360 | | 电气工程及其自动化专业综合设计  Comprehensive Design of Electrical Engineer and Automation | | 3 | 3周 | 0 | 3周 | 7 | ★ |  |  |
| 17 | XX160330 | | 电气工程及其自动化专业毕业实习  Graduation Practice of Electrical Engineering and Automation | | 3 | 3周 | 0 | 3周 | 8 |  |  |  |
| 18 | XX160320 | | 电气工程及其自动化专业毕业设计  Graduation Design of Electrical Engineering and Automation | | 12 | 12周 | 0 | 12周 | 8 |  |  |  |
| 小计  Subtotal | | | | | 54 |  |  |  |  |  |  |  |
| **个性化培养平台（选修课）**  **Customized Education Courses(Selective)** | | | | | | | | | | | | |
| 1 | XX190250 | 程电力系统方向必选 | | 电力系统保护  power system protection | 2 | 32 | 32 | 0 | 6 |  |  |  |
| 2 | XX190260 | 电力系统的计算机辅助分析  computer-aided analysis of power system | 2 | 32 | 32 | 0 | 6 |  |  |  |
| 3 | XX191070 | 专业方向实验1(电力系统继电保护、电力系统的计算机辅助分析)  professional experiment 1 | 2 | 32 | 0 | 32 | 6 |  |  |  |
| 4 | XX161960 | 电力系统课程设计  Course Design of Power System | 2 | 32 | 0 | 32 | 7 |  |  |  |
| 5 | XX190410 | 运建筑电气与智能化方向必选 | | 建筑智能化系统  Building Intelligentized System | 2 | 32 | 32 | 0 | 6 |  |  |  |
| 6 | XX160650 | 建筑电气工程设计基础  Foundation of Building Electrical Design | 2 | 32 | 32 | 0 | 6 |  |  |  |
| 7 | XX191080 | 专业方向实验2(建筑智能化系统、建筑电气工程设计基础)  professional experiment 2 | 2 | 32 | 0 | 32 | 6 |  |  |  |
| 8 | XX190370 | 供配电系统课程设计  Course Design of Power Supply and Distribution System | 2 | 32 | 0 | 32 | 7 |  |  |  |
| 小计  Subtotal | | | | | 8 |  |  |  |  |  |  |  |

注：标注★的为“学位课程”。

1. **集中实践环节( Intensive Practical Training Courses)**

| 序号No. | 课程编号Course Code | 课程名称  Course Name | | 学分  Credits | 实践学时PracticeHours | 开课学期Semester | 学位课Diploma Course | 辅修Minor | 双学位Double Degree |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | XX161740 | 数字电子技术实验A  Digital Electronic Technological Experiment A | | 1 | 16 | 5 |  |  |  |
| 2 | XX160620 | 计算机原理及应用实验  Experiments of Computer Principles and Applications | | 0.5 | 8 | 5 |  |  |  |
| 3 | XX190240 | 电力电子技术课程设计  Course Design of Power Electronic Technology | | 2 | 32 | 5 |  |  |  |
| 4 | XX190310 | 电气控制与PLC实验  Experiments of Electrical Control and PLC | | 1 | 16 | 6 |  |  |  |
| 5 | XX191070 | 专业方向实验1  professional experiment 2 | 必选1 | 2 | 32 | 6 |  |  |  |
| 6 | XX191080 | 专业方向实验2  professional experiment 2 | 2 | 32 | 6 |  |  |  |
| 7 | XX161960 | 电力系统课程设计  Course Design of Power System | 必选1 | 2 | 16 | 6 |  |  |  |
| 8 | XX190370 | 供配电系统课程设计  Course Design of Power Supply and Distribution System | 2 | 16 | 6 |  |  |  |
| 9 | XX160350 | 电气工程及其自动化专业生产实习  Production Practice of Electrical Engineering and Automation | | 2 | 2周 | 6 |  |  |  |
| 10 | XX160360 | 电气工程及其自动化专业综合设计  Comprehensive Design of Electrical Engineer and Automation | | 3 | 3周 | 7 | ★ |  |  |
| 11 | XX160330 | 电气工程及其自动化专业毕业实习  Graduation Practice of Electrical Engineering and Automation | | 3 | 3周 | 8 |  |  |  |
| 12 | XX160320 | 电气工程及其自动化专业毕业设计  Graduation Design of Electrical Engineering and Automation | | 12 | 12周 | 8 |  |  |  |
| 小计Subtotal | | | | 28.5 |  |  |  |  |  |

注：标注★的为“学位课程”

**七、学位课程(Core Courses and Diploma Courses)**

**学位课程：**自动控制理论、供配电系统、电力电子技术、电力系统分析、电气工程及其自动化专业综合设计。

Degree Courses: Automatic Control Theory, Power Supply and Distribution System,Power Electronic Technology, Power System Analysis, Comprehensive Design of Electrical Engineer and Automation.

**八、课程体系结构图(The Curriculum Chart)**



**Ⅷ.Guidance for Selecting Courses**



**九、学制及学分要求(Duration of Schooling and Credit Requirements)**

1. 学制(Length of Schooling)：2年(Two years)
2. 学分要求(Required credits)：

（1）专科学习阶段学分（105）：按照对应本科普教专业培养方案进行学分认定，未修课程采取补修方式修读（跟随对于普教本科专业大一、大二学生修读）……(各专业可根据具体情况或特殊要求做补充规定)

（2）专升本阶段学分（65）：学生在校期间必须修满本方案规定的65学分方能毕业，其中，各环节的具体学分要求如下表。

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **学科（大类）教育平台Discipline Coureses** | **专业教育**  **平台Major Courses** | **个性化培养平台**  **Customized Education Courses** | **总学分**  **Total**  **Credits** |
| **必修课**  **Required Courses** | **3** | **54** | **/** | **65** |
| **选修课Selective Courses** | **/** | **/** | **8** |

**十、授予学位(**Degree Conferred)

毕业时符合学位授予条件的，授予工学学士学位。

**十一、说明(Notes)**

各学期应修学分建议(Credit Allotment for Each Semester)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **学期**  **Semester** | **五**  **5th** | **六**  **6th** | **七**  **7th** | **八**  **8th** | **学分合计**  **Total** |
| **建议应修学分**  **Credits** | **24** | **21** | **5** | **15** | **65** |