

# The Optimization and Practice of the Curriculum Structure of Electrical Engineering under the Double First-class Perspective

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**Abstract :** In the discipline construction of colleges and universities, the teaching mode can be transformed according to the development of the school and combined with the discipline characteristics of the electrical engineering major in order to build a university and a first-class discipline. In the teaching mode and subject construction, it is necessary to actively adopt a more diversified teaching mode. At the same time, pay attention to the training of school talents to maintain a certain degree of conformity with the needs of the enterprise for professional talents, so as to adapt to the highest degree in the context of double first-class construction. The social needs for the cultivation of talents in electrical engineering majors in education.

**Keywords :** Double First Class; Electrical Engineering Major; Course Structure

In higher education, leaders in related disciplines of electrical engineering should formulate suitable training programs based on the characteristics of the school and the situation of students. Under the general trend of double first-class construction, they should be used to train electrical technical professionals, and then cultivate more outstanding talents for the society. At present, the overall promotion of the construction of world-class universities and first-class disciplines is the general trend of university education. The ability of universities to run schools and the level of school discipline construction need to be further improved. The concept of “Double First Class” provides more novel research ideas and teaching methods for the transformation of technical talent training methods in higher education.

## 1. Overview of “Double First Class” discipline construction

The key to building first-class universities and first-class disciplines lies in the fact that universities should carry out innovative reforms in subject teaching, and at the same time, they should continue to explore and improve education and training programs in scientific research and education, and actively promote the practical scientific research work in subject teaching and subject areas. First of all, as teachers in colleges and universities, we must establish more advanced educational values, and we must pay attention to the training of various talents in the process of teaching and training students, especially for this subject, the ultimate requirement is the practical operation ability under the combination of theory and practice. Teachers of relevant subjects in colleges and universities should pay attention to gradually transforming the exploratory advantages in scientific research to the cultivation of students, pay attention to the learning of students’ professional knowledge and the teaching effect of professional knowledge in the classroom, in order to give full play to the advantages of cultivating innovative professional and technical talents. Secondly, in terms of student employment, the school must uphold the attitude of “preparing for a rainy day”, pay attention to strengthening school-enterprise cooperation, cultivate the scientific and practical professionals that are really needed in the company, and cooperate with the company through the “integration of production and education” as a means. Finally, in the subject and professional system, we must pay attention to the improvement of teaching content, and pay attention to advancing with the times, fully improve and optimize the teaching content in time, and strive to be at the forefront of innovation in knowledge and research, and cultivate

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students' innovative thinking and ability.

## **2. “Double first-rate” can be regarded as an opportunity not to be missed for the development of disciplines in universities**

Throughout the process of “double first-class” construction, academic leaders in universities should first pay attention to the current development of the school's internal disciplines, understand the current deficiencies of the discipline and professional development, and prohibit mental slack in teaching. College teachers should attach great importance to and pay attention to the enthusiasm and initiative of students in the college. At the same time, the differences between disciplines and the unique teaching and learning characteristics of the disciplines must be paid attention to, because these are closely related to the formulation of teaching programs and student training programs. The formulation of the training plan must pay attention to the practical use of the advantages of subject professional talent training. On the basis of clarifying the goal of double first-class construction, clarify the positioning of the school. In order to strengthen the development of various colleges and universities and the endogenous motivation of disciplines, timely and appropriate improvements should be made based on the background of my country's first-class discipline construction and some existing problems. It is possible to gradually break through the fixed mode of resource acquisition by adopting performance evaluation methods in subject teaching, so that the subject teaching of colleges and universities is always in a good state of competition.

## **3. The importance of the training of technical talents related to electrical engineering in higher education**

The training of technical talents in engineering majors requires students to have higher practical and operational abilities, and the curriculum teaching objectives should focus on cultivating students' ability to analyze and solve problems. Technical talents for employment and enterprises are different from academic research talents in the traditional sense. The former pays more attention to students' technical operation ability and job adaptability. This is also in line with the fact that some university training models place too much emphasis on theoretical traditions and seriously neglect the impact on students' knowledge and practical ability. Therefore, in the daily teaching process of colleges and universities, attention should be paid to guiding students to combine theoretical knowledge with practical training, and striving to cultivate more outstanding talents required by the society has become the focus of the training of engineering and technical talents in higher education.

## **4. Existing problems in the cultivation of electrical engineering talents in higher education**

There are certain misunderstandings in the training of talents in traditional universities, which are not suitable for the development of today's society. This is mainly manifested in the use of multimedia and innovative thinking in the professional field. For example, some Internet-related technologies and modern classroom teaching methods have not been fully utilized. Teachers should give full play to the use of relevant innovative resources on the Internet in classroom teaching to assist teaching and improve classroom teaching efficiency and teaching effects.

The curriculum content is still traditional theoretical knowledge, and at the same time it is widely recognized by the academic community. However, the theory and teaching content lack a certain degree of innovation and the curriculum is relatively simple. Therefore, in the course content, teaching knowledge should be enriched in time, and practical courses should be supplemented at the same time, and the difficulty of completing the practical courses and the grading system should be improved, so that students should pay attention to practical operation skills.

## **5. Strategies and methods for training technical talents in electrical engineering under the vision of “double first-rate”**

Specialization has always been an issue that should be paid attention to in the professional teaching and training of colleges and universities, which is particularly important in the teaching process of engineering majors. At the same time, the improvement of a professional and technical level can also drive the construction and development of related disciplines, which can provide more professional and technical talents for social development and technological progress. In the process of talent training, we must pay attention to the cultivation of students' innovative thinking. Students must learn to use the theoretical and professional knowledge they have learned to find employment in related positions, and innovation determines the vitality of an enterprise in the market. Therefore, students in related majors should not only pass the practical technical ability, but also pay attention to innovation in the process of formulating and implementing the plan, and at the same time pay attention to the improvement of work efficiency, to maximize the added value of the product, rather than blindly. To carry out repetitive work in a timely manner, we must strive to

gradually transform repetitive work into mechanized production. In the teaching process of colleges and universities, attention should be paid to the establishment of systematic training goals of disciplines, clarification of professional positioning, and continuous optimization of teaching organization and teaching methods. At the same time, it is necessary to construct “production, learning and research” teaching in the process of school-enterprise cooperation. The establishment of the training goal focuses on the theoretical knowledge, practical skills and professional qualities, and optimizes the training program and classroom teaching. At the same time, experts can be hired to participate in the formulation of courses and the construction of disciplines, and formulate a clear and feasible target system for talent training that can be quantitatively tested and evaluated. In terms of professional positioning, colleges and universities should pay attention to the creation of school-running characteristics and strengthen the core competitiveness of disciplines to form a good social image and social reputation of the discipline. Guided by social and market demands, training technical talents is the best choice for school orientation and subject orientation. In terms of the form of teaching organization, the curriculum construction can be optimized through quality courses, and at the same time, the teaching mode and teaching plan can be optimized and adjusted by referring to the talent training teaching methods of other institutions with successful experience.

## 6. Conclusion

In summary, colleges and universities should take into account the actual conditions of their own schools and student levels, seize opportunities, clarify the goals of discipline construction on the basis of careful analysis of policies and interests, and strive to promote discipline construction and promote talent training under the background of double first-class. The goal was successfully achieved. Based on the promotion of modern science and technology, many colleges and universities have begun to develop school-enterprise cooperation training models for engineering majors, striving to cultivate high-quality talents needed by society, so as to promote professional development and achieve high-quality training of talents.

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