

Research on the Quality Assurance System of Graduation Project

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Abstract: Introduce the “three completes” management thought of “total quality management” into the quality management of undergraduate graduation design, construct a three-level quality assurance system of all staff, whole process, and all-round for graduation design, and apply it to our. In the graduation design of the energy and power engineering major of the school, practice has proved that it can effectively improve the quality level of the undergraduate graduation design.

Keywords: Graduation Design; Quality Assurance System; “Three Comprehensives” Assurance System

Graduation design is an important teaching link for students to carry out engineering and technical training, and it is also a key teaching practice activity for training students to comprehensively use the knowledge they have learned to analyze and solve problems, and to complete the basic training of engineer quality. The quality of graduation design directly reflects the teaching level and talent training quality of colleges and universities, and is an important evaluation content to measure the quality of college education and the efficiency of running a school. In recent years, the quality of college graduation design has been declining. In view of this, drawing on the experience of successful operation of the ISO9000 quality management system standard in the corporate world, the “three comprehensives” management thought of “total quality management” is rationally introduced into the quality management of our university’s undergraduate graduation design, and the graduation design quality “three comprehensives” is constructed.

1. People-oriented, full participation in the quality assurance of graduation design

The all-hands nature of the graduation design quality management is the key to the graduation design quality assurance. The main body of the quality management of graduation design is people. The factors that affect the quality of graduation design include not only students, but also instructors, teaching and research offices, departments and staff of school-level graduation design management functional departments. Everyone is responsible for the quality of the graduation design, and each subject of the graduation design must clarify their respective responsibilities in the quality assurance system. The quality assurance system should strengthen the people-oriented thinking, attach importance to the overall coordination of students, teachers, and managers, fully mobilize the enthusiasm of teachers and students, and form a situation where everyone cares about and values the quality of graduation design. Only when the quality of personal work is improved can the quality of the overall graduation project be improved.

In the “full staff” quality assurance system, the school-level functional department plays a leading role in the entire graduation design quality management. The functional departments of the colleges and departments play a coordinating role in the quality management of graduation design. According to the unified requirements and arrangements of the school, combined with the actual situation of the college, they actively carry out work, formulate and implement

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graduation design rules, ensure the normal operation of the graduation design quality management system, and ensure the graduation design quality.

The teaching and research section is the most basic organization of teaching management, responsible for the quality management of graduation design of this major. The teaching and research section is responsible for implementing various graduation design systems, arranging for the implementation of graduation design, and promptly making targeted rectifications for problems found.

The instructor is a person with intermediate professional title and above, responsible for guiding students' graduation design, reviewing students' design plans, regularly checking the progress and quality of students' work, and answering questions and guidance on time. Instructors should attach importance to and strengthen the cultivation of students' innovative consciousness and creative thinking ability, attach importance to the cultivation of students' independent analysis, solving practical problems, and engineering quality. They should focus on enlightenment and guidance, and cannot be replaced or let alone.

Students are the main body of the graduation design activities. Students complete the graduation design tasks independently under the guidance of teachers, do not falsify, and do not copy other people's work content. Students should take the initiative to accept the inspection and guidance of the instructor, study hard, be diligent in practice, be brave in innovation, and complete the graduation design tasks with quality and quantity. Students are the key to ensuring the quality of graduation design. Therefore, students' enthusiasm and initiative must be fully mobilized. Only in this way can the quality of graduation design be truly guaranteed.

2. Focus on prevention and control the quality of graduation design in the whole process

Establish the concept of "the quality of graduation design is formed in the whole process", transform the management of graduation design from "after-the-fact check" to "pre-prevention", and strengthen process control. Take the graduation design task book as the main line, implement various tasks in stages, control the whole process of the formation of the graduation design quality, and pay close attention to every link of the graduation design to ensure the overall graduation design quality.

First of all, in the topic selection stage, it is required that the topic selection should be combined with teaching, scientific research and production, and each graduation design instructor is required to combine the actual production or the tasks of the teaching and research laboratory construction as far as possible on the premise of meeting the basic requirements of teaching. In order to ensure the quality of the graduation design, the instructor shall declare the topics of the graduation design in advance, and form optional topics after passing the review to ensure the quality of the graduation design from the source. In addition, the number of questions should be greater than the number of students to ensure that students have the freedom to choose, and to fully mobilize and give full play to the initiative of students in learning.

Secondly, in the mid-term inspection stage, the mid-term inspection is mainly divided into three levels: self-examination of students and instructors, inspections of teaching and research offices and colleges, and random inspections of schools. In self-examination, the instructor will check the students with him, and conduct a comprehensive check on the students' learning attitude, discipline and attendance, whether the design is planned as planned and the quality of the completed design, find out the existing problems, and guide the students to find solutions; The teaching and research section should organize peer experts to conduct mid-term inspections, focus on comments, learn from each other's strengths, and promote each other; The school conducts mid-term random inspections of graduation design, finds problems, and proposes suggestions and measures for improvement. Mid-term inspection is an important part of the "full process" guarantee for the quality of graduation design. Schools and departments should strengthen mid-term inspection to ensure the quality of graduation design.

The last is the graduation design defense, which is an important part of the graduation design process and an important means of checking, evaluating and assessing the quality of the graduation design of students. The teaching and research section must strictly control the defense. Only students who complete the requirements of the graduation design on time can pass the defense qualification. Review and enter the defense link. Through the defense, examine and train the students' oral expression ability, adaptability, logical thinking ability, comprehensive use of professional knowledge and analysis ability, and check the authenticity of the article and the depth of students' knowledge through the defense. If the graduation design fails to meet the quality requirements, it will not be approved; For the graduation design with poor

results, a second defense can be arranged to ensure the overall quality of the graduation design on the basis of ensuring the fairness and science of the defense results.

3. Quality is supreme, all-round graduation design quality assurance

When constructing the graduation design quality assurance system, all elements of the graduation design quality shall be planned and systematically planned in an all-round way, so as to realize the optimal allocation of teaching resources such as human, financial, and material. It is necessary to grasp the quality of teachers' guidance and the quality of students' learning; It is necessary to grasp both the quality of management and the quality of service.

First of all, we must strengthen the training and improve the quality of instructors. Instructors are the core element of the quality of graduation design. We should build a team of high-quality professional teachers who can teach theories and guide practice. Strengthen the sense of responsibility of the instructor, improve the ability of instruction, improve the method of instruction, strengthen self-cultivation, and truly play the role of the instructor in the undergraduate graduation project.

Second, we must strengthen the education and guidance of students. Enhancing the knowledge reserve of students is the prerequisite for improving the quality of graduation design. Before the graduation project begins, students are required to review and consolidate their professional knowledge and make a good reserve of professional knowledge. Graduation design is the most comprehensive teaching link to realize the cultivation of students' comprehensive ability. We should pay attention to cultivating students' comprehensive ability and improve students' comprehensive quality. Students are required to earnestly participate in graduation internships, enhance their engineering practice ability, and enhance their perceptual understanding of graduation design; Strive to improve students' ability to consult literature and correctly use specifications, manuals, and atlases; Improve students' computer drawing ability; Stimulate students' design interest and improve. The degree to which students attach importance to the graduation project.

Third, increase funding, improve the working conditions of graduation design, ensure that there are sufficient design classrooms, library materials, etc., and increase and update professional library materials in a timely manner. Strengthen the construction of professional practice teaching base, establish a teaching practice base for graduation design, and create a good practical environment for students to complete graduation design with high quality.

Finally, we must strengthen the quality control of graduation design, establish and standardize the quality evaluation system. Strengthen the process control and supervision of the instructor on the graduation design, set up a graduation design inspection team, conduct staged results inspections, mid-term inspections and completed results inspections for each student's graduation design, and record the inspection results into the graduation design grades, so that the evaluation of graduation design results is more comprehensive and objective. Establish a scientific and standardized graduation design quality evaluation system, formulate different evaluation items and standards for instructors, reviewers, and defense groups, from selecting topics, collecting reading materials, researching ideas and frameworks, analyzing and solving problems, and whether there is innovation in work. Awareness or unique insights, learning, work attitude and task completion, independent work ability and other specific assessments, each assessment index has its own connotation, and the evaluator's observation point has its own focus, neither overlapping nor blind spots .

4. Conclusion

Engineering graduation design is an important part of practical teaching and an important evaluation content to measure the quality of education. Establishing a scientific and reasonable graduation design quality assurance system is of great significance to undergraduate teaching. Through investigation, research, and analysis, this project puts forward a quality management guarantee system of "full staff, whole process, and all-round" for graduation design. Practice has proved that it can effectively improve the quality of undergraduate graduation design.