Appendix D - 11 Documents of Experimental Teaching Management System

National Experimental Teaching Demonstration Center for Civil Engineering
Measures for the Management of Laboratory Experimental Teaching Work

Chapter 1 General Provisions

Article 1 Experimental teaching is an important part of teaching work. It is a crucial teaching link for cultivating students to master the basic theories, basic methods, and basic experimental techniques of experiments, improving students' observation, operation, analysis, and innovation abilities, and promoting the comprehensive improvement of students' overall quality. In order to achieve standardized management of experimental teaching and improve the quality of experimental teaching, these measures are formulated.

Article 2 These measures divide the management of experimental teaching into target management, process management, quality management, and inform -ation management. The Academic Affairs Office is responsible for the manage -ment of experimental teaching in the school.

Article 3 Practical teaching activities carried out in basic and specialized course laboratories, computer rooms, language rooms, and other teaching venue- s fall within the scope of management of these measures.

Chapter 2 Target Management

Article 4 The experimental teaching plan is an organic part of the professional training plan. It is formulated by each school (department) and examined and approved by the Academic Affairs Office. The principles and requirements for its formulation are consistent with those of the professional training plan.

Article 5 experimental courses with strong independence and a relatively large number of class hours can be set up separately. Every 24 class hours of experimental courses count as 1 credit, and the minimum credit unit is 0.5 cr -edit.

Article 6 experimental courses in the training plan should have experimen -tal teaching syllabuses. The teaching syllabuses should pay attention to the co- nnection with theoretical courses and other related courses. The experimental t- eaching syllabus should stipulate the names of experimental projects to be offe- red in this course, experimental class hours, experimental content, experimental requirements, assessment methods, and other content.

Article 7 For each experimental course, experimental textbooks or experi- mental instruction manuals should be selected or compiled according to the exp -erimental syllabus. Experimental textbooks or instruction manuals should meet the teaching requirements at different levels. It is advocated to use loose - leaf experimental instruction manuals, which are compiled by teachers based on th -eir accumulated experimental teaching experience and are organized by experi- mental projects.

Article 8 Each teaching experimental project should have an experimental project card. The director of each laboratory should organize relevant personnel to check the experimental project cards at the beginning of each academic ye- ar according to the experimental teaching tasks. The content of experimental pr -ojects to be changed or newly opened should be reported to the Academic Af -fairs Office in both electronic and written forms. The names of experimental projects should be standardized, and the same experimental content should not appear in different experimental projects. The teaching experimental project is generally based on 2 class hours as the minimum basic unit.

Article 9 Experimental teaching should be carried out in accordance with the plan and should not be changed at will. Canceling an experiment or adding a new experiment should be applied for in writing by the laboratory at the beginning of the semester. After being reviewed and approved by the relevant leaders in charge of each school (department, institute), it should be submitted to the Academic Affairs Office for approval before it can be incorporated into the teaching plan.

Article 10 The proportion of design - based, comprehensive, and research - based experiments in basic experimental courses and basic technical experim ental courses should generally not be less than 70%. For the remaining courses, the reform of experimental teaching should also be strengthened, and a certain number of design - based, comprehensive, and research - based experiments s

-hould be offered. Comprehensive experiments should not only reflect the comp rehensiveness of the content but also the comprehensiveness of knowledge, abil -ity, and quality cultivation. It is a compound experiment for comprehensive tra -ining of students. Design - based experiments, on the other hand, are experim -ents in which students design experimental plans and methods, focusing on cu -ltivating students' creative ability and innovative spirit to independently solve practical problems in engineering and technology.

Article 11 Laboratories should create conditions to achieve open - style management. (1) Open the experimental time and experimental content. Student -s can choose the experimental time within a certain range, and they are allow e-d to conduct the same experimental project several times until they get satisf y-actory results. In terms of experimental content, in addition to the compulsor y-y experimental projects, a large number of optional experimental projects sho -uld be provided for students. Students can freely choose experimental projects in a "menu - ordering" way. (2) Open the laboratory, that is, the laboratory i -s open to students throughout the day. Students can make full use of the labo -ratory conditions for extracurricular experimental research and scientific and te-chnological production activities, making the laboratory a base for cultivating st -udents' innovative and practical abilities.

Chapter 3 Process Management

Article 12 Each semester, the Academic Affairs Office issues the experim ental teaching assignment for the next semester according to the teaching plan. Each laboratory should implement it specifically before the end of the semest-er. Within two weeks after the start of each semester, the laboratory should su -mmarize and submit to the Academic Affairs Office the detailed arrangements of the experimental teaching tasks it undertakes this semester (experimental cl-ass schedule, including major, class, course name, experimental project name, c -lass hours, and teaching progress, etc.).

Article 13 The main lecturers of courses to which non - independently - set - up experimental courses belong should participate in the experimental te-aching process. Teachers of theoretical courses generally should participate in e

-xperimental teaching. The ratio of the number of teachers participating in expe -rimental teaching to the number of full - time technical personnel in the labor -atory should be greater than 3. Generally, one experimental instructor is assign -ed for every 14 - 18 students in an experimental class.

Article 14 Laboratories should strengthen the management of instruments and equipment, repair them in a timely manner, and improve the equipment av -ailability rate and utilization rate. Experimental equipment should be ensured a -s follows: for basic courses, one set per person should be provided; for techni -cal basic courses and professional basic courses, one set for every two people should be provided; for professional courses, in principle, the number of peop -le in each group should not exceed 4 (except for special equipment).

Article 15 Experimental teachers should require students to preview the e -xperiment well before the experiment and submit a preview report. Teachers s -hould check students' preview situation before the experiment. Students who h- ave not previewed or whose preview does not meet the requirements are not a -llowed to participate in the experiment.

Article 16 Students should follow the guidance of teachers and experimen t-tal technicians, conduct experiments seriously and earnestly, and make experi- mental records truthfully (the original experimental data record paper should be signed by the instructor before leaving the laboratory). They should write exp -erimental reports as required. An experimental report generally should include the experimental purpose, experimental instruments and equipment and their wo -rking principles, experimental procedures, original experimental data, experimen t-tal results and analysis, etc. Curves should be drawn on coordinate paper.

Article 17 In the first experimental class of each course, the teacher sho- uld introduce in detail to the students the purpose, requirements, accident handl -ing methods, and relevant rules and regulations of the experimental course. Be -fore the start of experimental operations, the instructor should briefly explain t -he key points, difficulties, and precautions. Training in basic operations, basic skills, and basic experimental methods should be strengthened to cultivate stude -nts' rigorous, serious, and realistic scientific attitude. During the experiment, te -achers should carefully guide students' operation processes to ensure the safety of equipment and personnel. Teachers should strictly record students' attendanc

-e. After the experiment, teachers should organize students to clean up and tid-y up the experimental items. Only after checking can students leave the laborat-ory.

Article 18 Experimental teachers should carefully correct experimental rep-orts, conduct assessment and record of experimental scores. Experimental repor-ts that do not meet the requirements should be returned for re - doing. Those who plagiarize others should be seriously investigated and punished. Teachers use a red pen to correct experimental reports. The correction content includes correcting mistakes, grading, and indicating the date. The correction record is a-n important basis for experimental assessment.

Article 19 Experimental instructors should be experienced teachers with t-he title of lecturer, engineer, or above. Teaching assistants, postgraduate student-s, and excellent upper - class undergraduates can participate in experimental g-uidance work as assistant experimental instructors. Teachers or experimental te-chnicians who guide experiments for the first time must conduct a trial lecture and a trial experiment. They can take up their posts only after passing.

Article 20 Instructors should prepare lessons carefully and write teaching plans. For newly opened experimental courses and newly added experimental p-rojects, instructors must pre - do the experiments and write experimental repor-ts. The laboratory director should organize relevant personnel to conduct evalu-ations. Teachers and technicians should enter the laboratory in advance before the experimental class, check the experimental equipment, and make pre – cla-ss preparations to ensure the timely progress of the experimental class. After t-he experimental class, experimental technicians and instructors should carefully fill in the duty log and experimental class records.

Article 21 Experimental teachers should actively carry out experimental te-aching research, reform obsolete experimental projects, experimental content, a-nd experimental methods, and continuously improve the quality of experimental teaching. The teaching quality of experimental courses is an important part of the assessment of teachers and experimental technicians. It should be carefully assessed according to relevant regulations and recorded in the assessment file-.

Chapter 4 Quality Management

Article 22 For the assessment results of experiments that are not set as independent courses, the scores will be included in the total course score at a proportion of 10% - 40% according to the proportion of experimental class hours in the total course class hours. Students with an unqualified experimental score are not allowed to take the course exam. They can only take the exam after making up the experiment and getting a passing grade.

Article 23 The assessment of independently - set experimental courses is scored on a 100 - point scale, and the assessment results are recorded separate -ly. The assessment content includes: (1) Experiment preview; (2) Operation an -d attitude performance during the experiment process; (3) Experimental reports, etc. When students do not obtain scores for items (1) and (2), the score of it -em (3) is invalid.

Article 24 If a student is absent from an experimental course for more t- han one - third of the total class hours, the experimental score will be recorde -d as zero. Students who miss experimental projects must make up for them b efore their scores can be calculated. If a student fails an experimental course, t -hey should retake the experiment according to the school's regulations. The ret -aking is managed in accordance with relevant regulations.

Chapter 5 Information Management

Article 25 Laboratories should establish and improve experimental teachin -g archives and strengthen archive management. The materials of experimental teaching archives include:

(1) Laboratory work plans, laboratory construction plans, experimental teac -hing plans, experimental teaching syllabuses, experimental project cards, and e- xperimental instruction manuals;

(2) Experimental teaching assignment sheets, experimental teaching arrange -ments or experimental class schedules, experimental class record cards, and stu

-dents' experimental reports (retain those from the recent three years, including students' original experimental data records);

(3) Operation records of large - scale equipment, maintenance records of instruments and equipment;

(4) Information about laboratory personnel and experimental teaching staff, records of trial experiments and trial lectures, duty logs of laboratory personn el, work records of laboratory directors, and materials related to the transformat ion of experimental equipment and the reform of experimental content and met hods;

(5) Other relevant materials.

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