

### **Appendix D - 11 Documents of Experimental Teaching Management System**

National Experimental Teaching Demonstration Center for Civil Engineering

Laboratory Asset Management System

**Chapter 1 General Provisions** 



**Article 1.** This measure is formulated in accordance with the relevant pro-visio ns of the "Administrative and Institutional State - owned Assets Managem-ent Meas ures" and the "Regulations on Laboratory Work in Institutions of Hig-her Learning" to strengthen the management of instruments and equipment and improve their utilization efficiency.

**Article 2.** All instruments and equipment in the center are the property of the s chool. According to factors such as price and performance, instruments a-nd equipment are respectively designated for management at the ministry, prov-incial, school, c ollege, and department levels.

Under the principles of unified leadership, classified and hierarchical management, and the combination of management and use, a full - time experimenta-l staff member shall be responsible for the management of instruments and equipment. In light of the specific circumstances, the management system of the center's instruments and equipment shall be determined, and the institutions and responsibilities shall be clarified. Instruments and equipment purchased through various channels, whether for business or non - business purposes, shall be managed in accordance with unified regulations. In particular, the management of valuable instruments and equipment shall be well - done.

**Article 3.** The principle of optimized allocation shall be implemented in th-e all ocation of instruments and equipment. Based on the actual situation of th-e center, management systems for the application, approval, purchase, acceptanc-e, use, mainte nance, and repair of instruments and equipment shall be formulated, and a post - re sponsibility system shall be implemented to give full play t-o the utilization efficien cy of instruments and equipment.

**Article 4.** When purchasing instruments and equipment, efforts should be made to achieve high - quality and low - price, and prevent counterfeit and sh-oddy prod ucts from entering the school. For imported instruments and equipm-ent, the accepta nce work shall be completed within the claim period after arriv-al. In case of non - compliance, claims shall be filed in a timely manner.



After the purchased instruments and equipment are recorded in the account-s by the school's competent department, the physical instruments and equipme-nt shall m atch the financial records.

The price threshold for the management scope of instruments and equipme-nt is consistent with the fixed - asset price threshold stipulated by the Ministry of Finance.

**Article 5.** In the management of instruments and equipment, efforts should be made to fully tap the potential of existing instruments and equipment, and attention should be paid to maintenance, function development, renovation, up-grading, and lif e - extension work. The self - made new teaching and research instruments and equipment are actively encouraged, and they shall be registere-d after passing the technical appraisal.

Instruments and equipment should be kept in good condition during use, a-nd re asonable mobility and resource sharing should be achieved. Idle waste an-d the priv atization of public property shall be eliminated.

The transfer and scrapping of instruments and equipment must be carried o-ut in accordance with relevant regulations, after technical appraisal and approv-al (filing) by the competent department. The relevant income shall be handled in accordance with the school's financial management regulations.

Article 6. Archives shall be established for the materials of instruments an-d eq uipment, and computer - based management shall be implemented. Regula-r analysis, research, and summarization shall be carried out on the types, quan-tities, amounts, distribution, and usage status of instruments and equipment, and various statistical data shall be reported as required. The construction of inte-rnal and external networ k resources on campus should be strengthened to reali-ze the online transmission of various data, and modern means should be fully utilized to implement scientific m anagement of instruments and equipment.



**Article 7.** Importance should be attached to the construction of the team o-f ins trument and equipment workers. According to the actual work situation, methods for the training, assessment, and promotion of professional knowledge and technical ca pabilities of employees shall be formulated. Achievements in e-xperimental teaching, experimental technology research and development, etc. sh-all be recognized and re warded.

#### Chapter 2 Purchase of Valuable Instruments and Equipment

**Article 8.** Instruments and equipment with a unit price of RMB 100,000 (i-nclu sive) or above are regarded as valuable instruments and equipment.

#### **Article 9.** Scope of valuable instruments and equipment:

- 1. Instruments and equipment with a unit price of RMB 400,000 (inclusive) or above;
- 2. Sets of instruments and equipment whose single unit (piece) price is les-s than RMB 400,000, but are purchased as a set and need to be used in coor-dination, with a total value of more than RMB 400,000;
- 3. Instruments and equipment with a unit price of less than RMB 400,000, but are imported from abroad and are clearly defined as valuable and scarce according t o the regulations of relevant departments.
- Article 10. Valuable instruments and equipment should be purchased reason ably in accordance with the development plan of the discipline. The following procedures should be followed for the purchase of valuable instruments and equipment:

#### 1. Feasibility study report for the purchase of instruments and equipment

(1) The necessity of the instrument for the work tasks of the school and t-he l ocal area, and the prediction and analysis of the workload

(For updated instruments and equipment, the situation of the original instrument s and equipment in terms of efficiency should be provided);



- (2) The advancement and applicability of the purchased instruments and eq-uipm ent, including the applicable disciplinary scope of the instruments and equ-ipment, a nd the rationality of the selected brand, grade, specifications, perform-ance, price an d technical indicators;
- (3) The implementation of the funds for accessories, spare parts, software s-upp orting the instrument and equipment to be purchased, and the annual opera-ting and maintenance costs of not less than 6% of the purchase cost after pur-chase;
  - (4) The staffing of instrument and equipment workers;
- (5) The safety and completeness of the installation site, operating environm-ent and various auxiliary facilities;
  - (6) The sharing plan within and outside the school;
  - (7) Benefit prediction and risk analysis.

#### 2. Approval for the purchase of instruments and equipment

- (1) Submit the feasibility study report;
- (2) The school's competent department organizes relevant discipline experts and relevant personnel to demonstrate the feasibility report and submit review opinions;
  - (3) Approval by the in charge school (college) president.

**Article 11.** Establish a practical and feasible purchase and supervision mechanis m for instruments and equipment, implement methods such as public bidd-ing or gr oup purchasing to ensure the quality of the purchased instruments an-d equipment w hile saving school funds.

#### Chapter 3 Use and Management of Valuable Instruments and Equipment

Article 12. When purchasing instruments and equipment, choose a company o-r ma nufacturer that can clearly define and perfect the installation, commissioni-ng, accept



ance, claim, warranty of the instruments and equipment, and can pro-vide spare part s at any time. Ensure that the purchased instruments and equip-ment meet the required technical specifications, and after passing the acceptanc-e, they can operate normally within the serviceable period.

**Article 13.** A technical file shall be established for each instrument and equip-ment, with records of use, maintenance, etc. In accordance with the relevant re-gulations of the National Bureau of Technical Supervision, regularly calibrate and verify the p erformance and indicators of the instruments and equipment. Ti-mely repair those with reduced accuracy and performance.

Article 14. For instruments and equipment, implement the principle of specializ-ed management and shared use to achieve resource sharing. Try to make use of the ins truments and equipment already available in other units to avoid regi-onal duplication of instrument and equipment purchases. While completing the teaching and research tasks of the school, the school's instruments and equipment should carry out coll aborative service work such as in - school, inter - sch-ool, and cross - departmental consultations, training, analysis and testing, etc., and strive to improve the utilization rate of the instruments and equipment.

**Article 15.** A charging standard should be formulated according to the usage o-f th e instruments and equipment.

No charge should be imposed for the use of instruments and equipment fo-r int ernal teaching. A reasonable machine - hour fee can be charged for their use in sci entific research. When the school's instruments and equipment are pr-ovided for exte rnal services, the machine - hour fee should be charged as req-uired. The collected funds shall be uniformly managed by the school's financia-l department. According t o the relevant regulations of the school, provincial, n-ational, and competent departments, most of the funds shall be returned to the relevant laboratories to compensate for the operation, consumption, maintenance, repair of the instruments and equipmen t, and to pay for necessary labor cost-s.



**Article 16.** Generally, instruments and equipment are not allowed to be disasse-mble d, modified, or used in parts. If disassembly, modification, or decompositi-on is trul y necessary for function development, renovation, upgrading, or the d-evelopment of new products, it should be approved by the school department in charge of equipment.

**Article 17.** Actively train personnel who can independently operate the instrum-ents and equipment, and strengthen management by implementing the "certifica-te - based operation system" to avoid damage to the instruments and equipme-nt.

The number and structural level of the personnel equipped for the instrum-ents and equipment should be based on the principle of ensuring the normal o-peration of the instruments and equipment and giving full play to their efficie-ncy.

The users, repairers, and managers of the instruments and equipment must unde rgo training and assessment, and corresponding post - responsibility syste-ms and m anagement methods should be established.

#### Chapter 4 Write - off and Scrap of Valuable Instruments and Equipment

Article 18. For instruments and equipment that are truly in need of being scrap ped due to technological backwardness, damage, lack of spare parts, or ex-cessive m aintenance costs, write - off and scrapping shall be carried out in a timely manner in accordance with the relevant provisions of the "Administrativ-e and Institutional State - owned Assets Disposal Management Implementation Measures".

- 1. Submit a scrapping application;
- 2. Organize relevant experts for deliberation and put forward a technical ap-prai sal report and opinions;
  - 3. Approval by the in charge school (college) president;
- 4. Report to the competent department for approval or filing according to r-elev ant regulations.



**Article 19.** The residual value recovered from the scrapped instruments and equi pment shall be included in the school's annual equipment funds in accord-ance with the relevant provisions of the "Financial System of Institutions of Hi-gher Learning" and the "Accounting System of Institutions of Higher Learning (Trial)".

### Chapter 5 Assessment, Rewards and Penalties for Valuable Instruments and Equipment

Article 20. An assessment system shall be implemented for the use and manageme nt of instruments and equipment.

- 1. At the end of each year, self assessment shall be carried out for the instr-ume nts and equipment under ministry level management in accordance with the "Annu al Evaluation Form of the Efficiency of Valuable Instruments and Eq-uipment in Ins titutions of Higher Learning". The scope and content of the ass-essment of the instr uments and equipment under school level management ca-n be appropriately adjust ed.
- 2. The school's competent department shall organize inspections and verification-s and make them public.
- 3. The usage of the instruments and equipment under ministry level manage-ment (category 03) shall be made public every year, and inspections and evaluations shall be organized in a timely manner.
- 4. The scope, content, and methods for inspecting the usage of the managed instruments and equipment shall be formulated independently according to the ab-ove mentioned principles.
- Article 21. A rewards and penalties system shall be implemented for the use a-nd management of instruments and equipment. The units and individuals that have mad e outstanding achievements in the work of application for purchase, u-se managemen t, maintenance and repair, technical transformation, write off a-nd scrapping, etc. of the instruments and equipment shall be promptly rewarde-d by the school. For tho



se who are seriously derelict in their duties, the parti-es and the responsible persons shall be held accountable according to the serio-usness of the circumstances.

National Experimental Teaching Demonstration Center for Civil Engineering

**September 23, 2021** 

### **Appendix D - 11 Documents of Experimental Teaching Management System**

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## 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 information management. The Academic Affairs Office is responsible for the management 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 experime ntal 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 experimental t eaching syllabuses. The teaching syllabuses should pay attention to the co-nnection with theoretical courses and other related courses. The experimental t-eaching syllabu



s 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 experimental linstruction 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 instruct ion manuals, which are compiled by teachers based on their accumulated experimental teaching experience and are organized by experimental 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 projects 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 experimental courses es 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 comprehensiveness 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 experiments 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 manag ement. (1) Open the experimental time and experimental content. Student-s can choo se the experimental time within a certain range, and they are allowe-d to conduct the same experimental project several times until they get satisfy-actory results. In terms of experimental content, in addition to the compulsory-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 laboratory 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 experimental teaching assignment for the next semester according to the teaching plan. Each lab oratory 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 pro cess. Teachers of theoretical courses generally should participate in e-xperimental tea ching. The ratio of the number of teachers participating in experimental 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 che ck students' preview situation before the experiment. Students who h-ave not preview wed 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 experiment-tal technicians, conduct experiments seriously and earnestly, and make experi-mental rec ords 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, experiment-tal results and analysis, etc. Curve s should be drawn on coordinate paper.

Article 17 In the first experimental class of each course, the teacher sho-uld i ntroduce in detail to the students the purpose, requirements, accident handl-ing meth ods, 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 re alistic 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 reports that d



o not meet the requirements should be returned for re - doing. Those who plagiariz e others should be seriously investigated and punished. Teachers use a red pen to c orrect 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 tit le of lecturer, engineer, or above. Teaching assistants, postgraduate student-s, and ex cellent 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, in structors must pre - do the experiments and write experimental repor-ts. The laborat ory director should organize relevant personnel to conduct evaluations. 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-achi ng 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 re levant regulations and recorded in the assessment file-.



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 score d on a 100 - point scale, and the assessment results are recorded separate-ly. The a ssessment 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 before their score s 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 ar chives and strengthen archive management. The materials of experimental teaching a rehives include:

- (1) Laboratory work plans, laboratory construction plans, experimental teac-hing plans, experimental teaching syllabuses, experimental project cards, and e-xperiment al instruction manuals;
- (2) Experimental teaching assignment sheets, experimental teaching arrange-men ts 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 personnel, work records of laboratory directors, and materials related to the transformation of experimental equipment and the reform of experimental content and methods;
  - (5) Other relevant materials.

National Experimental Teaching Demonstration Center for Civil Engineering September 23rd, 2021



### **Appendix D - 11 Documents of Experimental Teaching Management System**

### National Demonstration Center for Experimental Teaching in Civil Engineering Laboratory Work Archive Management System

This approach is formulated to standardize and scientificize the archive management work of the laboratory.

**Article 1.** The basic tasks of laboratory archive management are to collect, organize, classify, file, store, and utilize the daily management m aterials and experimental teaching materials of the laboratory, so as to in spect, review, and verify the daily management level and experimental te



aching situation of the laboratory. Laboratory archives shall be managed in accordance with the requirements of the "Evaluation Standards for Bas ic Course Teaching Laboratories in Institutions of Higher Learning" and the "Evaluation Standards for Professional Laboratories in Institutions of Higher Learning".

#### 1. "System and Management" Archives:

- 1.1 Establishment of the Laboratory: Application documents from tea ching units to the school, and approval documents from the school.
- 1.2 Management Institutions: Relevant management documents from t he school and teaching units.
- 1.3 Construction Plans: Documents related to laboratory construction from the school and teaching units, construction plans, and relevant work records.
- 1.4 System: All documents related to the laboratory management system of the school.

#### 2. "Experimental Teaching" Archives:

- 2.1 Teaching Tasks: Experimental teaching syllabuses, experimental teaching assignment sheets, experimental teaching schedules, and records of student hour numbers.
- 2.2 Teaching Materials: Experimental teaching materials or instruction manuals for the experimental projects offered.
  - 2.3 Experimental Project Management: Experimental project cards.
- 2.4 Experimental Examinations or Assessments: The school's experim ental examination or assessment methods, implementation details of the c ollege (department)'s examination or assessment methods, students' test pa pers or grade records.
- 2.5 Experimental Reports: Students' experimental reports and students' original experimental data records.
- 2.6 Experimental Research: Plans, designs, summaries, and achievem ents (including publicly published papers and published monographs) of experimental research (improvement of experimental teaching methods, experimental techniques, and experimental devices). Laboratory scientific research tasks, funds, papers, and achievements.



2.7 Number of Students per Experiment Group: Experimental teachin g schedules, experimental project cards, student experiment group arrange ment sheets, etc.

#### 3. "Instrument and Equipment" Archives:

- 3.1 Instrument and Equipment Management: Fixed asset ledgers of instruments and equipment, registration of receipt, borrowing, and regula r inventory registration forms of the laboratory.
- 3.2 Management of Low value Durable Goods: Ledgers of low value durable goods with a unit price of less than 800 yuan, registration of receipt, borrowing, and regular inventory registration forms of the la boratory.
- 3.3 Maintenance of Instruments and Equipment: Instrument and equipment maintenance application forms, maintenance records.
- 3.4 Good condition Rate of Instruments and Equipment: Regular i nspection records, write off forms.
- 3.5 Precision Instruments and Large scale Equipment: Technical ar chives of instruments and equipment with a unit price of over 50,000 yu an, lists of management personnel, reports, and startup and usage record s.
- 3.6 Update of Instruments and Equipment: Annual statistics of the n umber of new additions and write offs for each type of instrument.
- 3.7 Number of Instrument Configuration Sets: Statistical tables of the number of sets of all experimental projects.

#### 4. "Experimental Team" Archives:

- 4.1 Laboratory Director: Appointment or employment documents of t he laboratory director from the school (college), senior technical title cert ificates, laboratory work logs, and other work records.
  - 4.2 Full time Staff: Laboratory post logs.
- 4.3 Post Responsibilities: Documents on laboratory post responsibilities and laboratory post logs.
- 4.4 Personnel Assessment: All management documents from the scho ol and college regarding laboratory personnel, assessment methods for ful



- 1 time and part time laboratory personnel, and regular assessment mat erials.
- 4.5 Personnel Training: All management documents from the school and college regarding laboratory personnel training, training plans for all laboratory personnel, and records of implementation.
- 4.6 Experimental Instructors: Relevant management documents for experimental instructors; records of trial runs by instructors for experiments newly opened in the current academic year; records of trial teaching evaluations for instructors newly taking up experimental teaching positions.

#### 5. "Environmental Safety" Archives:

- 5.1 Student Experiment Rooms: Laboratory floor plans, statistical tables of usable areas.
- 5.2 Facilities and Environment: National regulations on laboratory facilities and environment and records of implementation.
- 5.3 Safety Measures: Management documents and implementation records for fire prevention, explosion prevention, theft prevention, and anti-sabotage. Annual inspection records, user manuals, and implementation records of fire fighting and safety equipment.
- 5.4 Special Technical Safety: Management documents and implement ation records for high pressure vessels; permits and implementation records for the use of radioactive isotopes; management documents for germ s and experimental animals; registration books, management documents, a nd implementation records for the receipt of flammable and highly toxic items.
- 5.5 Environmental Protection: Management documents and implement ation records for the treatment of laboratory waste (waste gas, waste liquid, and waste residue).
- 5.6 Cleanliness and Hygiene: Documents on hygiene management an d inspection and implementation records.

#### 6. "Management Rules and Regulations" Archives:

6.1 Material Management System: All management systems in the la boratory regarding instruments and equipment; systems for compensation



for damage and loss of instruments and equipment; management methods for low - value durable goods; management methods for the use of pre cision instruments and large - scale equipment.

- 6.2 Safety Inspection System: Laboratory safety inspection system; regular inspection records by designated personnel.
- 6.3 Student Experiment Rules: School level student experiment rules, implementation details of college level student experiment rules.
- 6.4 Work Archive Management System: Management documents fro m the school and college regarding laboratory work archives, and imple mentation records of responsible persons.
- 6.5 Personnel Management System: Management documents from the school and college regarding personnel management and implementation records.
- 6.6 System for Collection and Organization of Basic Information: M anagement documents regarding the statistics of basic laboratory information and implementation records of responsible persons;
- Article 2. The leaders in charge of laboratory work in each teachin g unit and the laboratory directors shall strictly organize and implement the archive management work of their departments, including the collection, organization, classification, and filing of laboratory materials, in accordance with these measures. The laboratory director is responsible for the establishment and management of laboratory archives.
- **Article 3.** Each laboratory shall appoint one part time archivist. T he collected materials shall be organized into boxes according to each it em above. The management period for archive materials shall cover the laboratory archive materials of the past four years.
- **Article 4.** Each laboratory should keep records of its work, and eve ry matter should have a basis. Falsifying or tampering with archive mat erials is prohibited. The archive materials must be legible, clean, and pr operly stored.
- Article 5. The Experimental Management Office of the Academic A ffairs Office will conduct irregular spot checks on the laboratory archive



management work of each teaching unit. The performance of the archive work of each laboratory will be regarded as one of the important bases for the selection of excellent laboratories and the awarding of experimental teaching excellence awards.

**Article 6.** These measures shall come into force as of the date of promulgation.

National Demonstration Center for Experimental Teaching in Civil Engineering

June 18th, 2020

### **Appendix D - 11 Documents of Experimental Teaching Management System**



# National Demonstration Center for Experimental Teaching in Civil Engineering Safety Regulations for Water and Electricity Use

In order to effectively carry out the safety work of water and electricity use at the National Demonstration Center for Experimental Teaching in Civil Engineering, prevent related accidents, ensure the safety of the lives and property of teachers, students and staff, and better serve teaching and scientific research, these regulations are specially formulated.

- 1. During the operation of instruments and equipment, if any abnormal situation occurs, power should be cut off immediately to check the cause. The equipment can only be used after being repaired. In case of major problems, the laboratory director should be reported in a timely manner for handling.
  - 2. When using electrical appliances, do not touch the electrical



switches with wet hands or wet objects. When the instruments and equipment are not in use or after work (except for those that need to be used continuously), the power switch should be turned off.

- 3. Electrical equipment should be connected to the leakage protector as required.
- 4. Joints and broken ends of electrical wires must be properly wrapped with insulating tape.
  - 5. Regularly check the integrity of the electrical circuit.
- 6. The faucet must be tightly closed after use. When there is a water outage, do not open the faucet waiting for water to avoid potential hazards.
- 7. Do not pour debris such as fine scraps and tea dregs into the sink to prevent blocking the sewer pipe.
- 8. After the experiment, before leaving the laboratory, check whether the water and electricity switches are properly closed.

National Demonstration Center for Experimental Teaching in Civil Engineering

September 20th, 2018



### **Appendix D - 11 Documents of Experimental Teaching Management System**

# National Demonstration Center for Experimental Teaching in Civil Engineering Fire and Theft Prevention Regulations

This system is formulated to earnestly conduct fire - prevention and anti - theft work at the National Demonstration Center for Experimental Teaching in Civil Engineering, prevent related accidents, ensure the safety of the lives and property of teachers, students, and staff, and better serve teaching and scientific research.

1. Strengthen safety education and enhance safety awareness. In daily life, pay attention to potential factors that may cause



accidental fires or fires during experimental operations. Regularly check whether the connecting wires and controllers of heating appliances are in good condition, and whether their placement meets fire - prevention requirements.

- 2. Prepare dry powder fire extinguishers, foam fire extinguishers, and wet rags according to the situation. Experimental personnel should understand the performance, usage methods, and precautions of fire extinguishers and conduct regular inspections.
- 3. The quantity of inflammable and explosive items should be sufficient only to meet the testing needs. Large scale storage of such items is not allowed in the laboratory. The storage area should be cool, ventilated, and dry.
- 4. During the experiment, fully understand the object being heated. Operators are not allowed to leave their posts without permission.
- 5. In case of a fire, handle it according to the following situations respectively:
- (1) In case of an electrical equipment fire, immediately cut off the power supply and use a dry powder fire extinguisher to extinguish the fire.
- (2) In case of a building material fire, a dry powder fire extinguisher or a wet cloth can be used to put out the fire. If a large scale fire has broken out, call the police immediately and organize rescue efforts simultaneously.



- (3) After work and during holidays, close the doors and windows properly to prevent theft.
- (4) Newly arrived laboratory staff must receive safety and fire prevention education as well as training on the use of fire fighting equipment.

6. Establish a volunteer fire brigade.

Person - in - charge: Laboratory Director

Members: All laboratory staff

National Demonstration Center for Experimental Teaching in Civil Engineering

March 15th, 2018



### **Appendix D - 11 Documents of Experimental Teaching Management System**



# National Experimental Teaching Demonstration Center for Civil Engineering Interim Measures for the Borrowing and Management of Experimental Instruments and Equipment

In order to standardize the borrowing and management of experimental instruments and equipment at the National Experimental Teaching Demonstration Center for Civil Engineering (hereinafter referred to as the "Center"), conduct better routine maintenance and cleaning of the instruments, and improve the utilization efficiency of the instruments and equipment, the "Interim Measures for the Borrowing and Management of Experimental Instruments and Equipment" (hereinafter referred to as these "Measures") are hereby formulated.

#### I. Management Regulations

- 1. The borrowing of instruments and equipment referred to in these measures refers to the borrowing and return management of using instruments and equipment at locations other than the management site of experimental personnel.
- 2. The borrowers referred to in these measures are teachers or students of Hunan City University. No one else is allowed to borrow. Except for college students' innovative projects and open experimental projects, students are not allowed to borrow instruments and equipment.



- 3. The Center conducts unified management of experimental instruments and equipment, which are centrally stored in each sub laboratory. The full time experimental management personnel of each sub laboratory are responsible for the management and maintenance of the instruments and equipment.
- 4. Instruments and equipment fixed for use in the laboratory or high precision non mobile instruments and equipment are not lent out. When in need of use, inform the relevant laboratory management personnel, and use them only after registering in the "Instrument Use Record Book". After use, confirm with the laboratory management personnel that there is no abnormality of the equipment, and sign in the "Instrument Use Record Book" before leaving the laboratory.
- 5. Instruments and equipment suitable for borrowing can be borrowed for a short term after passing the training of the administrator of the sub laboratory of the Center. Special precision instruments with high operation difficulty and an original value of more than 200,000 yuan are not lent out alone, and special operators are required to accompany the instruments when going out. In principle, the borrowing period of all instruments and equipment shall not exceed 30 days. Those who fail to return on time will be restricted from borrowing instruments and equipment from the Center next time. If it is really necessary to extend the use time, the borrowing procedures shall be handled again.



- 6. For borrowing instruments and equipment, it needs to be approved step by step by four people: the full time management personnel of the sub laboratory, the laboratory director, the director of the Center's office, and the deputy director of the Center.
- 7. Before the experimental instruments and equipment leave the Center, the borrower needs to check that the borrowed instrument functions normally and its accessories are complete. When returning the instruments and equipment, it must be ensured that they are clean and tidy. Once it is found that the accessories are lost, the instrument cannot work normally, or the instrument is damaged, etc., the borrower shall compensate according to the relevant regulations of the "Measures for Compensation of Instruments, Equipment and Materials of Hunan City University".
- 8. After using the instruments and equipment, each project must submit an experimental result or experimental summary to the laboratory where the instruments and equipment are located.
- 9. The borrowing of instruments and equipment should be reserved at the corresponding laboratory at least one day in advance.
- 10. The borrowing of instruments and equipment follows the principle of "first come, first served". It is strictly prohibited for borrowers to re lend the borrowed instruments and equipment to others or lease them. Otherwise, they will be restricted from borrowing again, and the first borrower shall be responsible for all consequences caused during the borrowing process.



#### **II. Borrowing Procedures**

- 1. Issue the instrument borrowing approval form. The borrower shall present relevant materials such as the experimental implementation plan or contract to the full time administrator of the corresponding laboratory to issue the instrument borrowing approval form (see Attachment 1).
- 2. Relevant personnel of the Center sign for approval. The borrower shall obtain the instruments and equipment from the corresponding sub laboratory with the approval form.
- 3. Before the experimental instruments and equipment leave the Center, the borrower needs to check that each instrument functions properly and its accessories are complete, and then sign to confirm.
- 4. When returning the instruments and equipment, the full time management personnel of the sub laboratory shall confirm that each function of the instrument is normal, sign to confirm the return of the equipment, and the laboratory director shall also sign for approval.
- 5. Timely submit an experimental result or experimental summary to the laboratory where the instruments and equipment are located.

#### **III. Supplementary Provisions**

The Center is responsible for the interpretation of these measures, which shall come into effect as of March 10th, 2016.



### National Experimental Teaching Demonstration Center for Civil Engineering March 6th, 2016

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