Appendix A-9-2:Teaching Syllabus for Graduation Internship

Teaching Syllabus for Graduation Internship

Course Name	Graduation Practice					Course Code	9032615210
Chinese name	毕业实习						
Applicable Majors	Civil Engineering（Building Engineering Direction☑Road and Bridge Direction ☑Urban Rail Transit Direction☑）						
Course Nature	General Education Course☐ Professional Core Course☐ Intensive Practice Course ☑				Disciplinary Basic Course☐ Self - development Course☐ （Elective Compulsory☑）		
Offering Unit	School of Civil Engineering						
Total Class Hours	4 weeks + 6 weeks (Summer Vacation)	Credits	4	Contact Hours	50	Self - study Hours	70
Prerequisite Courses	production internship,Design of Concrete Structures, Design of Steel Structures, Principles and Methods of Construction						
Teaching Materials and Resources	Course Textbook: Reference Materials: Teaching Website:						

一、Course Introduction

The Graduation Internship, a subsequent course to "Production Practice", is a compulsory professional course for civil engineering majors. It is a practical - based course that comprehensively applies professional knowledge like the principles of concrete structure design, steel structure design, and construction principles and methods, along with relevant knowledge from fields such as building engineering, road and bridge engineering, and urban rail transit engineering.The teaching objectives are to cultivate students' capabilities in applying professional knowledge, reading relevant codes, and participating in engineering practices to solve complex civil engineering problems. It aims to endow students with the basic qualities and skills necessary for technical and research work related to construction management, thus laying a solid foundation for their future work in construction management of complex engineering projects and structural design.

二、Graduation Requirements Supported by This Course and Their Implementation Paths

（1）Graduation Requirements Supported by This Course

Serial Numb	Graduation Requirement	Specific Content of Graduation Requirement Indicator Points

er	Indicator Point	
1	Graduation Requirement3.2	Be able to develop construction and management plans for specific complex engineering problems in civil engineering. In the process of plan formulation, fully consider constraints such as society, health, safety, law, culture, and environment, demonstrating an innovative mindset.
2	Graduation Requirement 4.1	For complex engineering problems in civil engineering, based on scientific principles, conduct research through literature review or relevant methods, and analyze solution approaches.
3	Graduation Requirement6.2	Be capable of analyzing and evaluating the impacts of the design and construction of civil engineering projects, as well as solutions to complex engineering problems, on society, health, safety, law, and culture.
4	Graduation Requirement7.1	Be aware of and understand the concepts and connotations of environmental protection and sustainable development.

（2）Realization Paths of Graduation Requirement Indicator Points in This Course

1.Course Objectives

Through the teaching of this course, students will master fundamental knowledge and acquire certain construction management capabilities. The specific course objectives are as follows:

Course Objective 1: When formulating engineering design plans and construction plans, students should be able to fully take into account restrictive factors such as society, health, safety, law, culture, and the environment.

Course Objective 2: Students should be capable of evaluating the impacts of the design, construction, and operation and maintenance plans of civil engineering projects, as well as solutions to complex engineering problems, on society, health, safety, law, and culture.

Course Objective 3: Students should understand the concepts of environmental protection and sustainable development.

Course Objective 4: Students should be able to conduct research on complex engineering problems in civil engineering and analyze solution approaches.

2.Corresponding Relationship between Course Teaching Objectives and Graduation Requirement Indicator Points

Graduation Requirement Indicator Points	Course Teaching Objectives
Graduation Requirement 3.2	Course Objective 1
Graduation Requirement 4.1	Course Objective 4
Graduation Requirement 6.2	Course Objective 2
Graduation Requirement 7.1	Course Objective 3

三、Expected Learning Outcomes

The expected learning outcomes of this course are as follows:

Training Objectives /Knowledge Unit	Competency Items	Initial Proficiency Level	Required Proficiency Level	Expected Learning Outcomes	Corresponding Graduation Requirements
1.Plan Formulation	◆ When formulating engineering design and construction plans, be able to fully consider restrictive factors such as society, health, safety, law, culture, and environment.	L1	L2	**1.** Elaborate on the consideration and implementation of restrictive factors such as society, health, safety, law, culture, and environment in the special construction plan.	3.2
2.Plan Evaluation	◆ Be able to evaluate the impacts of civil engineering project construction and operation and maintenance plans, as well as solutions to complex engineering problems, on society, health, safety, law, and culture.	L1	L2	**2.** Evaluate the impacts of a certain design, construction, or operation and maintenance plan on society, health, safety, law, and culture.	6.2
3.Environmental Protection	◆ Understand the concepts of environmental protection and sustainable development.	L2	L3	**3.** Describe and evaluate the implementation of environmental protection and sustainable development in a certain design, construction, or operation and maintenance plan.	7.1
4.Analysis and Research	◆ Be able to conduct research on complex engineering problems in civil engineering and analyze solution approaches.	L2	L3	**4.** Compile a research report for a certain complex engineering problem in civil engineering.	4.1

三、Course Assessment

（一）Course Assessment Structure

Assessment Items		Proportion	Proportion
Daily Performance	Weekly Reports	60%	A total of three reports. The contents are respectively: 1. Plan Formulation; 2. Plan Evaluation; 3. Environmental Protection. Evaluated by the instructor.
Outcome Assessment	Internship Report	20%	Compile one research report. Evaluated by the instructor.
	Internship Defense	20%	Evaluated by the defense teachers.
Total		100%	

（二）Course Assessment Evaluation Criteria

Assessment Items 1 and 2: Weekly Reports and Internship Reports

Project	Evaluation Criteria	得　分
Weekly Reports and Internship Reports	The content meets the requirements of the task assignment, is valuable and well - organized. The output is neat, the expression is standardized, the chart design is reasonable, and the expression is accurate.	90-100 points
	The content meets the requirements of the task assignment, is relatively well - organized. The output is neat, the expression is standardized, the chart design is relatively reasonable, and the expression is relatively accurate.	80-89 points
	The content meets the requirements of the task assignment, is relatively well - organized. The output is relatively neat, the expression is relatively standardized, the chart design is basically reasonable, and the expression is basically accurate.	70-79 points
	The content meets the requirements of the task assignment, but the organization is lacking. The output is less neat, the expression is less standardized, the chart design is less reasonable, and the expression is less accurate.	60-69 points
	The content meets the requirements of the task assignment, but the organization is unclear. The output is untidy, and the expression is not standardized.	0-59 points

Assessment Item 3: Internship Defense

Evaluation Criteria	Score
The presentation materials are complete, well - organized, and of practical application value. The introduction is concise with clear expression. Answers to questions are accurate, showing unique insights, and professional terms are used precisely.	90-100 points

The presentation materials are complete, relatively well - organized, and of great practical application value. The introduction is concise with relatively clear expression. Answers to questions are relatively accurate, and professional terms are used accurately.	80-89 points
The presentation materials are complete, relatively well - organized, and of certain practical application value. The introduction is relatively concise with relatively clear expression. Answers to questions are relatively accurate, and professional terms are used relatively accurately.	70-79 points
The presentation materials are relatively complete, but the organization is somewhat lacking, and of certain practical application value. The introduction is less concise with less clear expression. Answers to questions are less accurate, and professional terms are used less frequently.	60-69 points
The presentation materials are haphazardly pieced together with chaotic logic. The introduction is verbose with unclear expression. Answers to questions are inaccurate, and no professional terms are used.	0-59 points

五、Course Teaching Methods

The course adopts the form of decentralized internships. During the teaching process, students are regarded as the main body of learning. We guide students to study independently, cultivate their awareness of active exploration, rigorous work attitude, and their abilities to recognize and solve practical engineering problems as well as perform engineering calculations. Also, we encourage students' innovative thinking. The teaching form mainly focuses on students' self - study, supplemented by teachers' guidance. The main measures are as follows:

1) Set certain internship tasks to cultivate students' practical ability during the implementation of engineering projects.
2) Infiltrate the student - centered teaching concept throughout the entire teaching process, guiding students to learn independently and think critically.
3) Pay attention to students' individualized development during individual guidance, and encourage students with extra capacity to think innovatively.
4) Focus on process control, enabling students to truly master the methods and steps of civil engineering project implementation during the internship.

六、Course Evaluation and Continuous Improvement Mechanism

（一）Course Evaluation

The course evaluation is conducted once per semester. A scoring method is employed for assessment based on the following:

Course Objectives 1, 2, and 3 are evaluated according to the scores of Weekly Report 1, Weekly Report 2, and Weekly Report 3 respectively.

Course Objective 4 is evaluated based on the score of the research report.

The internship defense is not included in the achievement evaluation.

（二）Continuous Improvement Mechanism

（1）Establish a continuous improvement system

① Form a continuous improvement group for this course.

② The leader of the continuous improvement group is responsible for organizing, implementing, and supervising the continuous improvement process.

③ Develop continuous improvement measures.

（2）Establish the course continuous improvement group

Leader: The course coordinator　　Members: Members of the course team

（3）Course continuous improvement methods

① **Daily performance assessment mechanism**: According to the learning situation of each cohort of students, teachers in the course group must summarize and count various indicators of students' daily performance assessment every four weeks, adjust students' states in a timely manner, and make corresponding records.

② **Final - exam assessment mechanism**: Analyze the final - exam papers, count the scores of each part of the test questions, use the statistical results for overall analysis and research of this course, and make improvements for the next cohort of students.

（4）Course continuous improvement measures

① For daily performance assessment, measures such as holding symposiums, forming discussion groups, setting up study groups, and communicating with students individually are adopted for improvement.

② For final - exam assessment, based on the problems students encounter in the exam and the key content of this course, measures such as unified tutoring for students taking make - up exams are adopted for improvement.