Ministry of Higher Education and Scientific Research
Supervision and Scientific Evaluation Authority
Department of Quality Assurance and Academic Accreditation

Academic Program Description Form for Colleges and Institutes Academic Year

University: Shatt Al-Arab
College/Institute: Engineering
Scientific Department: Civil
Date of Form Completion: 01/09/2024

Signature
Name of Head of Department:

Asst. Lecturer Nabeel Najm Abdullah

Signature

Name of Scientific Assistant: Dr. Jawad Kadhim

Reviewed by:
Quality Assurance and University Performance Division
Name of Division Director: Dr. Jasem Mohsen Yasser

Signature:

الدكتور
جاسم محسن ياسر
Dr.Jasim Al-Battat

جامعة شط العرب
كلية الهندسة
العمادة
SHATT AL-ARAB UNIVERSITY

أ.م.د.احسان قاسم محمد
عميد كلية الهندسة

Dean's Approval

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

The model description provides a brief description of the main features of the course and the scientific outputs that the model student is expected to achieve if the student takes advantage of the learning opportunities available for the course. It should be compared with the description of the program.

1. Teaching Institution	Shatt Al-Arab University
2. University Department/Centre	Civil Engineering Department
3. Course title/code	Soil Mechanics 2
4. Modes of Attendance offered	Class attendance
5. Semester/Year	2nd semester / 3rd year
6. Number of hours tuition (total)	75 hrs.
7. Date of production/revision of this specification	2024
8. Aims of the Course	
• The course aims to provide basic information about soil as an engineering material used to support foundations, identify its general properties, how it is affected by loads, changes in moisture content, and its behavior in the short and long term.	

9· Learning Outcomes, Teaching, Learning and Assessment Method
A1- Identify the types of stresses in saturated soils. A2- Study the consolidation settlement and methods of calculating it. A3- Identify the methods used to find the shear resistance in the soil. A4- Identify the methods of calculating the lateral soil pressure.
B. Subject-specific skills B1 - Learn how to calculate the types of stresses generated in the soil.

B2 - Study the theory of consolidation and methods of calculating settlement over time.
B3 - Derivation of equations to find the soil shear resistance.
B4 - Derivation of equations to evaluate the lateral soil pressure on supporting structures.

Teaching and Learning Methods

•Theoretical lectures, practical lectures, small discussion groups, presentation of scientific films, and writing reports.

Assessment methods

• Interacting within the lecture.
• Homework and reports.
• Short exams (quizzes).
• Semester and final exams.

C. Thinking Skills

C1- Attention: Arousing the students' attention by implementing one of the applied programs on the display screen in the hall.
C2- Response: Follow up the student's interaction with the material displayed on the screen.
C3- Attention: Follow up on the interest of the student who interacted more with the presented material, by increasing this interaction by requesting other programs and applications to display.
C4 - Forming the direction: meaning that the student is sympathetic to the presentation and may have an opinion about the direction of the presented topic and defend it.
C 5- Formation of value behavior: meaning that the student reaches the top of the emotional ladder, so that he has a stable level in the lesson and does not become lazy or fidgety.

Teaching and Learning Methods

• The usual theoretical presentation method using the writing board and depending on the style (how and why) of the subject and according to the curriculum of the subject.
• The theoretical presentation method using the (data show) device and depending on the method (how and why) of the subject and according to the subject curriculum.
• The method of laboratory display using special devices for measuring the different properties of the substance under experiment.

Assessment methods

- Direct questions in a manner (how and why) for the subject during the theoretical and practical lecture.
- Sudden exams during the theoretical and practical lecture.
- Quarterly exams for the theoretical and practical side.
- Final exams for the theoretical and practical side.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1- Develop the student's ability to perform the duties and deliver them on time

D2 - Logical and programmatic thinking to find programmatic solutions to various problems

D3 - developing the student's ability to dialogue and debate

D4 - Develop the student's ability to deal with modern technology, especially the Internet

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	3 2	Knowledge of different types of soil stresses	In Situ Stresses	Th. Lecture Prac. Lecture	Written exam
2	3 2	Fundamentals of Consolidation	Compressibility of Soil-Consolidation Settlement	Th. Lecture Prac. Lecture	Written exam
3	3 2	Determination of Consolidation Characteristics by Laboratory Consolidation Test	Soil-Consolidation Settlement	Th. Lecture Prac. Lecture	Written exam
4	3 2	Application to Laboratory Consolidation Test Results	Soil-Consolidation Settlement	Th. Lecture Prac. Lecture	Written exam
5	3 2	Application to calculate primary and secondary consolidation	Soil-Consolidation Settlement	Th. Lecture Prac. Lecture	Written exam
6	3 2	Determination of time rate of consolidation	Soil-Consolidation Settlement	Th. Lecture Prac. Lecture	Written exam
7	3 2	How to accelerate consolidation settlement	Soil-Consolidation Settlement	Th. Lecture Prac. Lecture	Written exam
8	3 2	Introduction to shear strength of soil	Shear Strength of Soil	Th. Lecture Prac. Lecture	Written exam
9	3 2	Derivation of Mohr-Coulomb Failure Criterion	Shear Strength of Soil	Th. Lecture Prac. Lecture	Written exam
10	3 2	Determination of shear strength parameters from laboratory tests	Shear Strength of Soil	Th. Lecture Prac. Lecture	Written exam
11	3 2	Application of finding shear strength parameters from laboratory tests	Shear Strength of Soil	Th. Lecture Prac. Lecture	Written exam

12	3 2	Application of finding shear strength parameters from laboratory tests	Shear Strength of Soil	Th. Lecture Prac. Lecture	Written exam
13	3 2	Introduction to lateral earth pressure	Lateral Earth Pressure	Th. Lecture Prac. Lecture	Written exam
14	3 2	Derivation of Rankine's Theory of active and passive pressure	Lateral Earth Pressure	Th. Lecture Prac. Lecture	Written exam
15	3 2	Application of Rankine's Theory of active and passive pressure	Lateral Earth Pressure	Th. Lecture Prac. Lecture	Written exam

11. Infrastructure	
1- Required reading: · Books · COURSE MATERIALS · OTHER	- Principles of Geotechnical Engineering (By: Braja M. Das, 7th Ed.)
2. Key references (sources)	- Principles of Geotechnical Engineering (By: Braja M. Das, 7th Ed.)
A- Recommended books and references (scientific journals, reports ,....	
B- Electronic references, websites	Reputable websites. Libraries sites in some international universities.

12. Course development plan
Adding new subjects to the curricula within the development of the course by no more than 5%. Adding new references