Course Description form Soil Fertility

Course Name
Soil Fertility
Course Code
SOIF202
Semester/Year
First / 2025
Date this description was prepared
15 January 2025
Available attendance forms
In-Person
Number of Credit Hours (Total)/ Number of Units(total)
Number of hours = 5 (2 theoretical hours + 3 practical hours) , number of units = 3.5
Name of the course administrator (if more than one name is mentioned)
Dr.Louay Dawood Farhan
Course Objective

Objectives of the course :	Learn about the concept of soil fertility and its relationship to productivity Study of nutrient interactions in soil and factors affecting its readiness Identify mineral and organic fertilizers and their reactions in the soil

Teaching and Learning Strategies
In-person lectures for 15 weeks with two monthly exams, daily exams and scientific reports
Course Structure

Week	Credits	Intended Learning Outcomes	Unit or Topic Name	Learning Method	Evaluation Method
1	2	Nutritional Elements	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
2	2	Soil fertility and factors affecting it	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
3	2	Ways to get the nutrient to the root	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
4	2	Relationship between productivity and soil fertility	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
5	2	Soil Nitrogen and Fertilizer	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
6	2	Soil Nitrogen and Fertilizer	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
7	2	Soil phosphorus and fertilizer	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
8	2	Soil phosphorus and fertilizer	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
9	2	Potassium	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
10	2	Potassium	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
11	2	Sulfur, calcium and magnesium	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
12	2	Zinc, copper and manganese	Soil Fertility	Explanation and presentation of the mod and lecture	Exam

13	2	Iron and Boron	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
14	2	Microelement	Soil Fertility	Explanation and presentation of the mod and lecture	Exam
15	2	Organic fertilizers	Soil Fertility	Explanation and presentation of the mod and lecture	Exam

Practical Part

Week	Credits	Intended Learning Outcomes	Unit or Topic Name	Learning Method	Evaluation Method
1-2	3	Calculate the amount of fertilizer added to carry out a fertility trial	Soil Fertility	Attendance Lecture	Work Report
3-4	3	Basis and rules of fertility survey	Soil Fertility	Attendance Lecture	Work Report
5	3	Fertility Calendar	Soil Fertility	Attendance Lecture	Work Report
6	3	Nitrogen Fertilizer Descriptive Tests	Soil Fertility	Attendance Lecture	Work Report
7	3	Nitrogen Readiness Guide	Soil Fertility	Attendance Lecture	Work Report
8	3	Phosphate Fertilizer Descriptive Tests	Soil Fertility	Attendance Lecture	Work Report
9	3	Phosphorus Readiness Guide	Soil Fertility	Attendance Lecture	Work Report
10	3	Potash Fertilizer Descriptive Tests	Soil Fertility	Attendance Lecture	Work Report
11	3	Potassium Readiness Guide	Soil Fertility	Attendance Lecture	Work Report
12	3	Minor Items Readiness Guide	Soil Fertility	Attendance Lecture	Work Report
13	3	Plant Analysis and Fertility Assessment	Soil Fertility	Attendance Lecture	Work Report
14	3	Exam	Soil Fertility	Attendance Lecture	Work Report
15	3	Discussion of the experience report	Soil Fertility	Attendance Lecture	Work Report

Course Evaluation

EXAMINATIONS
Daily exams with discussion questions within the lecture
Degree of participation in questions related to the subject

Learning and Teaching Resources;

Required textbooks (methodology if any)	1- Awad, Kazem Mashhout (1987) Fertilization and Soil Fertility, Ministry of Higher Education and Scientific Research, University of Basra. 2- Al-Nuaimi, Saadallah (1999) Fertilizers and soil fertility. Ministry of Higher Education & Scientific research Al-Mustaqbal University 3- Havlin, J.L., Tisdale, S.L., Nelson, W.L., and Beaton, J.D. 2005, Soil Fertility and Fertilizers, 5th edition. USA 4- Awad, Kazem Mashhout, 1984. Practical tests for fertilizers and soil fertility. UN>Basra 5- Page, A.L. et. Al. 1982, Methods of soil analyisi, part 2 2nd Chemical and microbiological properties. Madison, Wisconsin, USA.
Key References (Sources)	1- Awad, Kazem Mashhout (1987) Fertilization and Soil Fertility, Ministry of Higher Education and Scientific Research, University of Basira. 2- Al-Nuaimi, Saadallah (1999) Fertilizers and soil fertility. Ministry of Higher Education & Scientific research Al-Mustaqbal University
Recommended supporting books and references (scientific journals, reports)	Iraqi academic scientific journals
E-References, Websites	Soil Science Society of America Library Genesis