

Course Description Form

1. Course Name:					
Soil survey and classification					
2. Course Code:					
SOSC448					
3. Semester / Year:					
First (autumn) semester 2023-2024					
4. Description Preparation Date:					
1 \ 9 \ 2023					
5. Available Attendance Forms:					
presence					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 theoretical + 3 practical / 3.5 units					
7. Course administrator's name (mention all, if more than one name)					
Name: M. Yousif Hasan Yousif					
M. Aman Adel Mouloud					
8. Course Objectives					
1 - Identify the physical and chemical properties of soil that are important in the study of soil survey and classification.					
2 - Clarifying and explaining the nature of the relationship between the physical and chemical characteristics of soils and the emergence and classification of soils.					
3- Learn about international soil classifications, especially the American classification of soils according to Soil Texa					
Possibility of classifying soils according to the modern American system to a sub-group level.					
9. Teaching and Learning Strategies					
- - Interactive lecture					
- Brainstorming					
- Dialogue and discussion					
- Field Training					
- Practical exercises					
- Field project					
- Interactive lectures					
- Brainstorming					
10. Course Structure					

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical	a1- Learn about the concept of soil surveying and classification and the terminology used	Soil composition and general terms	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	b7- Masters the importance of soil surveying from a pedological perspective	The importance of studying soil surveys from a pedological perspective	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	
2	2 Theoretical	a2- The student learns about the most important factors in soil formation and their role in soil classification	Soil formation factors and types of surveys	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	b8- The student masters the duties and qualities of the surveyor	The personal characteristics that must be possessed by the specialist conducting the survey	Assigning report writing tasks	
3	2 Theoretical	a3- Learn about the objectives and rules of soil classification systems	Soil classification	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	b9- The student masters the goals and objectives of soil surveys	Goals and purposes And soil survey grades	Assigning report writing tasks	
4	2 Theoretical	a4- The student learns about the classification systems in the world and the characteristics and types of Russian classifications	Soil classification systems in the world: Russian soil classification systems	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions

	3 Theoretical	b10- The student masters the tools and supplies used in the field and how to use them	Tools required for soil surveying	Assigning report writing tasks	
5	2 Theoretical	a5- The student learns about the characteristics and levels of the Canadian, FAO and international WRB Soil Classification System	Canadian, United Nations and International Soil Classification System	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	b11-The student understands how to prepare and interpret soil maps	Preparing and interpreting soil maps	Assigning report writing tasks	
6	2 Theoretical	b1- The student understands the ancient and modern American system and is familiar with the organizational structure of the modern soil classification system	American soil classification systems	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	b12-The student masters the stages of soil surveys	Stages of implementing soil surveys	Assigning report writing tasks	
7	2 Theoretical	b2- The student will be proficient in naming taxonomic units and soil temperature and moisture systems	Identify and name taxonomic units	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	B13-The student masters the field units of land and dealing with them in the field	Field units of land	Assigning report writing tasks	
8	2 Theoretical	b3- The student masters the elements that make up orders, suborders, great sums, families, and series	Soils order according to Soil Taxonomy and nomenclature	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions

	3 Theoretical	B14-The student masters how to make soil maps and their interpretations	Soil Maps	Assigning report writing tasks	
9	2 Theoretical	b4- The student masters the general characteristics of the Entisols order and the Vertisols order	Entisols order and Vertisols order	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions)
	3 Theoretical	What are the units? Cartography with explanation	cartographic units	Assigning report writing tasks	
10	2 Theoretical	b5- The student masters how to classify laridisol soils into subclass and supergroup	Aridisol Order	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	C4-The student explains how to use drawing scales and convert them from the ground to the map and vice versa	Drawing scales	Assigning report writing tasks	
11	2 Theoretical	b6- The student will be proficient in classifying the order of inceptors into the suborder and the supergroup	Inceptisol Order	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	C6- The student will master the use of remote sensing technology in soil mapping	Soil maps used in surveying and classifying soils	Assigning report writing tasks	
12	2 Theoretical	a6- The student learns about the classification of the molar group into the suborder and the supergroup	Mollisols Order	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions

	3 Theoretical	e1- Determines the types of survey maps and their uses in the field of soil surveying and classification	Sources of measured distances	Assigning report writing tasks	
13	2 Theoretical	c1- Explains the methods of classifying the order of physalis into suborder and supergroup	Alfisosls Order	Auditory methods Style of writing on the blackboard Direct dialogue style Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	e2- Measures areas on maps and devices used for measurement	Surveying and cadastral maps	Assigning report writing tasks	
14	2 Theoretical	c2- Explains the methods of classifying the order of Ultisols Order and Spodosols Order into the suborder and the supergroup	Ultisols Order Spodosols Order	audio methods and Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	e3- Determine soil survey reports, and compare Iraqi and global soil survey reports	Soil survey reports, Iraqi and international	Assigning report writing tasks	
15	2 Theoretical	c3- The student explains the classification of the orders of Oxisols order and Histisols Order into the suborder and the supergroup	Oxisols order Histisols Order	Auditory methods Style of writing on the blackboard Direct dialogue style, Assigning tasks and reporting	Short daily exam (quiz) Assignment of duty discussions
	3 Theoretical	c7- Explains the applications of surveys in Iraq	Applications of soil surveys in Iraq	Assigning report writing tasks	

11. Course Evaluation

relative weight	Score 100	Calendar appointment	Evaluation methods	
% 13	7 Theoretical	Theory week 15	A theoretical final report on soil survey and classification	1
	6 practical	Practical 1-15 weeks	A practical final report on practical lessons and field visits	

% 6	4 theoretical + 2 practical	Week 3	Quiz (1)	2
% 15	10 theoretical + 5 practical	Week 9	Midterm exam (theoretical and practical)	3
%6	4 theoretical + 2 practical	Week 12	Quiz (2)	4
%20	20	Practical exam week	Final practical test	5
%20	40	Theory exam week	Final theoretical test	6

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Soil survey and classification, Ahmed Saleh Muhammed
Main references (sources)	Fundamentals of Pedology, Walid Al-Akidi – Soil Survey and Classification
Recommended books and references (scientific journals, reports...)	Academic scientific journals, reports of international organizations, soil classification and the use of geographic information systems in making soil maps
Electronic References, Websites	<ul style="list-style-type: none"> • Conservation Service in cooperation with The University of Hawaii Agricultural Experiment Station. U.S. Government Printing Office, Washington, D.C. • Service in cooperation with Hawaii Institute of Topical Agriculture and Human Resources. University of Hawaii at Manoa, Honolulu.

Theoretical teacher: M. Yousif Hassan

Practical teacher: Lacture Aman Adel

Chairman Scientific Committee: Dr. Abdul Qader Abash

Head of Department: Dr. Ammar Younis