Department of Soil and Environment

Version 2022-08-04

Mv0215, Soils of the world and sustainable water and soil management– 2022

Course leader and teacher soils of the world: Erik Karltun
018-671277, 070-6901277, erik.karltun@slu.se
Examiner, Teacher and responsible for water and soil management part: Jennie Barron,
018-671578, 072-435 15 40, jennie.barron@slu.se
Course home page: https://student.slu.se/en/studies/courses-and-programmes/course-search/course/MV0215/10192.2122/Soils-of-the-world-and-sustainable-water-and-soil-management/

Lecture rooms:
FG-lab, MVM building
Computer lab 1, Ulls hus
Computer lab 2, Ulls hus
Computer lab 3, MVM building
Biosfären, MVM-building
Zoom – links published in Canvas calendar

Activity:
* = exercise that is compulsory
L = lecture

Teacher codes:
EK: Erik Karltun
IW: Ingrid Wesström
JB: Jennie Barron
OA: Omran Alshihabi
LM: Louise Malmquist
TK: Tobias Klöffel
GT : Getachew Tiruneh

Time table:

Date	Time	Room		Content	Teachers
August-September					
Week 35					
Mo 29	13^{15}-14^{00}	FG	*	Course introduction	EK, JB
	14^{15}-17^{00}	FG	L	Land degradation and water security for food systems	EK, JB
Tu 30	10^{15}-12^{00}	FG-lab	L	Factors influencing soil formation	EK
	13^{15}-16^{00}	Zoom	L	Soil erosion processes	OA
We 31	09^{15}-12^{00}	FG-lab	L	Minerals and weathering, cation exchange and textural differentiation	EK
Th 1	8^{15}-10^{00}	FG-lab	*	Soil profile description, introduction	EK
	10^{30}-17^{00}	Field	*	Soil profile description - field exercise; Outdoor - bring food and clothes for digging	EK

Date	Time	Room		Content	Teachers
Fr 2	09^{15}-12^{00}	FG-lab	*	Soil classification: Diagnostic horizons	EK
	16		*	*Hand in soil profile description (electronic)*	
Week 36					
Mo 5	8^{15}-12^{00}	FG-lab	*	Soil classification: Reference soil groups	EK
	13^{15}-15^{00}	FG-lab	L	Soils in temperate climate, soils strongly conditioned by parent material	EK
Tu 6	09^{15}-12^{00}	FG-lab	L	Soil and water designs and rainwater harvesting	OA
	13^{15}-16^{00}	C-lab 1 and 2 in Ulls Hus	*	Assignment 1. Soil and water design.	OA
We 7	10^{15}-12^{00}	C-lab 1 and 2 in Ulls Hus	*	Assignment 2: small reservoirs/tanks	OA
	13^{15}-16^{00}	C-lab 1 and 2 in Ulls Hus		Own work assignment 1 and 2	
Th 8	08^{15}-10^{00}	FG-lab	L	Soils in tropical climate, manmade soils, polar soils	EK
	10^{15}-12^{00}	FG-lab	L	Soils in dry climates, soils conditioned by topography	EK
Fr 9	08^{15}-12^{00}	FG-lab	*	Soil classification: Reference soil groups, introduction to subunits	EK
	16			*Hand in Assignment 1 and 2 (electronic)*	
Week 37					
Mo 12	08^{15}-17	Ultuna	*	Excursion I soils	EK, JB
Tu 13	08^{15}-18	Bus	*	Excursion II soils	EK,TK
We 14	08^{15}-10^{00}	FG-lab	L	Levelling and positioning	LM, TK
	10^{30}-17^{00}	Field	*	Field survey. Levelling and positioning: Outdoor exercise; bring food and clothes for outdoors activities	LM, TK
Th 15	10^{15}-12^{00}	FG-lab	*	Levelling and positioning - data analysis	LM,TK
Fr 16	9^{15}-12^{00}	FG-lab	*	Introduction: Soil Map of the World, maps and catenas	EK
	13^{15}-17^{00}	FG-lab	*	Soil Map of the World, maps and catenas	EK
Week 38					
Mo 19	09^{15}-12^{00}	FG-lab	*	Soil Map of the World, maps and catenas	EK
Tu 20	13^{15}-17^{00}	Biosfären	*	Soil Map of the World, maps and catenas, oral presentation	
We 21	09^{15}-12^{00}	FG-lab	L	Hydromechanics, flow principles in channels and pipes	OA
	13^{15}-16^{00}	FG-lab	*	Assignment 3. Hydromechanics.	OA
Week 39					
Mo 26	09^{15}-10^{00}	Zoom		Opportunities for questions before Soils of the world exam	EK

Date	Time	Room		Content	Teachers
Tu 27	8^{00} – 11^{00}			Examination: Soils of the world	
	13^{15}-16^{00}	Biosfären	L	Land drainage principles and methods	IW
We 28	09^{15}-12^{00}	Biosfären	L	Subsurface drainage	IW
	13^{15}-14^{00}	FG-lab		Introduction assignment 4.	JB
	16			*Hand in Assignment 3 (electronic)*	
Th 29	8^{15}-15^{00}	C-lab 1 in Ulls hus/C-lab3 in MVM	*	Assignment 4: Estimating crop water requirement	LM,JB
Fr 30	10^{15}-12^{00}	FG-lab	L	Irrigation techniques and design	JB
	16			*Hand in Assignment 4 (electronic)*	
October					
Week 40					
Mo 3	10^{15}-12^{00}	FG-lab	*	Assignment 5. Irrigation techniques and design.	TK
	13^{15}-15^{00}	Zoom		Two cases of irrigation systems : (USA: largescale schemes and Sub-Sahara Africa: small holder farmers)	JB with guest lecturers
	15^{15}-16^{00}	Zoom		Questioning time before land & water mgmt. exam	JB
Tu 4	16		*	*Hand in Assignment 5 (electronic)*	
Fr 7	8^{00}-11^{00}			Examination: Sustainable water and soil management	JB
Week 41					
Mo 10	10^{15}-12^{00}	Biosfären	*	Project work introduction: Interventions to improve sustainability and productivity…	JB
	13-16			*Project work*	
Tu 11	9^{15}-16^{00}	Biosfären		Consultations for project	JB
We 12	9-16			*Project work*	
Th 13	9-16			*Project work*	
Fr 14	9-16		*	*Project work: hand in part 1 at 1600 hrs*	
Week 42					
Mo 17	9-16			*Project work*	
Tu 18	9-12			*Project work*	
	13-16	JE-lab	*	*Project work* Consultation for project part 2	JB
We 19	9-16			*Project work*	
Th 20	9-16			*Project work*	
Fr 21	9-16			*Project work*, Project part 1 &2 report submission 16^{00}	JB
Week 43					
Mo 24	9-16			*Project work*, preparation for presentation and opposition	
Tu 25	13-16			*Project work* preparation for presentation and opposition	

Date	Time	Room		Content	Teachers
We 26	10^{15}-12^{00}	Biosfären	*	Final presentation of project work part 1&2	JB, EK
Th 27	10^{15}-12^{00}	Biosfären	*	Final presentation of project work part 1&2	JB, EK
	13^{15}-15^{00}	Biosfären	*	Course evaluation	JB, EK
November					
Th 3		TBD		Re-examination soils of the world	
Fr 11		TBD		Re-examination sustainable water and soil management	
June 2022		TBD		Re-examination both soils and water	