

Schedule for GEON05, 15 credits, 2021

Glacial Sedimentology – Processes, Sediments and Landform Systems

Course coordinator: Sven Lukas

Teachers:

LUH = Lena Uldal Hansen

SL = Sven Lukas

E-mail to teachers: lena.uldal_hansen@geol.lu.se; sven.lukas@geol.lu.se

Guest lecturers:

Alex Foyn (alex.foyn@btopenworld.com)

Monika Rabanser (monika.rabanser@yahoo.com)

Lukas Rettig (lukas.rettig@phd.unipd.it)

* = Excursion/fieldwork: Meeting times, points and details will be announced before each trip. Please remember your field equipment (waterproofs, boots, notebook, lunch etc.). Please be on time.

Day	Date	Hours	Activity	Grp	Room	Teacher
Mon	30/8	9.15-10	General Introduction for Master Students		229	DH, KL
		10.15-11.15	Course introduction GEON05		224	LUH, SL
		11.30-12.00	Safety briefing		229	Åsa W
		13.15-15	Library introduction and EndNote		229	Britta S
Tue	31/8	9.15-10	Lect. 1: Glaciology - introduction		Room	SL
		10.15-12.00	Lect. 2: Glacial hydrology		Room	LUH
		13.15-15	Lect. 3: Glaciology		Room	SL
Wed	1/9	10.15-12	Lect. 4: Glaciology		Room	SL
		13.15-16	Exerc. 1: Scientific approaches to sedimentological questions (self-study; Ch 1, Evans and Benn, 2021)			SL
Thu	2/9	8.00-20.00*	Fieldtrip 1: Observing and describing			SL
Fri	3/9	9.15-10	Lect. 5: Virtual glaciers: introduction		206	SL
		10.15-12	Exerc. 2: Aerial photograph interpretation	A	206	LUH
		10.15-12	Exerc. 3: Virtual glaciers (self-study)	B	CL	
		13.15-15	Exerc. 2: Aerial photograph interpretation	B	206	LUH
		13.15-15	Exerc. 3: Virtual glaciers (self-study)	A	CL	
		15.15-17	Exerc. 3: Virtual glaciers (self-study, continued)	A+B	CL	
Mon	6/9	9.15-12	Exerc. 3: Virtual glaciers – group discussion		Room	SL
		13.15-16	Lect. 6: Modern analogues		Room	SL
Tue	7/9	9.15-12	Exerc. 4: Catching up on reading (self-study)			
		13.15-16	Lect. 7: Ice-marginal processes		Room	SL
Wed	8/9	9.15-12	Lect. 8: Supraglacial processes		Room	SL
		13.15-16	Lect. 9: Subglacial processes		Room	SL
Thu	9/9	8.00-18.00	Exerc. 5: Glacial geomorphological mapping (self-study; reading of Chandler et al., 2018 and preparing flipped classroom on Fri 10/9)			
Fri	10/9	9.15-12	Exerc. 5 (cont'd): Flipped classroom on geomorphological mapping		Room	All (SL)

		13.15-15	Lect. 10: Matching process and product? Identifying and mapping glacial landforms (follow-up to Exerc. 5)			SL
		15.15-17	Exerc. 6: 'Informal' geomorphological mapping (using Google Earth)			
Mon	13/9	9.15-12	Lect. 11: Glacial landsystems: introduction		Room	SL
		13.15-16	Lect. 12: Glaciated valley landsystem		Room	SL
Tue	14/9	9.15-12	Lect. 13: Surging glacier landsystem		Room	SL
		13.15-14	Guest lecture 1: title to be confirmed		Room	
		14.15-17	Lect. 14: Ice sheet landsystems I		Room	SL
Wed	15/9	8.00-18.00*	Fieldtrip 2: Glaciated landsystems I			SL, LUH
Thu	16/9	9.15-10	Lect. 15: Ice sheet landsystems II		Room	SL
		10.15-11	Lect. 16: Glaciotectonism		Room	SL
		11.15-12	Sem. 1: Preparation for fieldtrip 4 (Ven)		Room	SL, LUH
		13.15-17	Glaciotectonism (self-study)			
Fri	17/9	8.00-18.00*	Fieldtrip 3: Glaciated landsystems II			SL, LUH
Mon	20/9	9.15-12	Lithofacies analysis (self-study; Ch 2 Evans and Benn, 2021)			
		13.15-15	Lect. 17: The glacial debris cascade		Room	SL
		15.15-17	Lect. 18: Sedimentological analyses: approaches		Room	SL
Tue	21/9	9.15-11	Lect. 19: Clast shape: theory		Room	SL
		11.15-12	Lect. 19: Clast fabric: theory		Room	LUH
		13.15-15	Exerc. 7: Clast fabric analyses: data collection	A	Room	LUH
		15.15-17	Exerc. 7: Clast fabric analyses: data collection	B	Room	LUH
Wed	22/9	10.15-12	Exerc. 8: Clast shape and fabric: plotting/data analyses		CL	LUH, SL
		13.15-16	Exerc. 9: A glacial sedimentology study – how was the study carried out? Reading and preparing the paper for Sem. 2 on 24/9 (self- study)			
Thu	23/9	9.15-17	Exerc. 9 continued (self-study)			
Fri	24/9	9.15-12	Sem. 2: Investigation methods: literature (paper from exercise 9, 22 and 23 September)		Room	SL
		13.15-16	Sem. 2: Investigation methods: literature (paper from exercise 9, 22 and 23 September)		Room	SL
Mon	27/9	*8.00-	Fieldtrip 4: Residential fieldtrip on the island of Ven			SL, LUH
Tue	28/9	*	Fieldtrip 4: Residential fieldtrip on the island of Ven			SL, LUH
Wed	29/9	*	Fieldtrip 4: Residential fieldtrip on the island of Ven			SL, LUH
Thu	30/9	*	Fieldtrip 4: Residential fieldtrip on the island of Ven			SL, LUH
Fri	1/10	-19.00*	Fieldtrip 4: Residential fieldtrip on the island of Ven			SL, LUH

Mon	4/10	9.15-12	Exerc. 10: Discussion of results, data processing		SL	LUH
		13.15-17	Exerc. 10: Discussion of results, data processing		SL	LUH
Tue	5/10	9.15-12	Exerc. 10 continued		SL	LUH
		13.15-17	Exerc. 10 continued		SL	LUH
Wed	6/10	9.15-12	Exerc. 10 continued, introduction to Exerc. 11		SL	LUH, SL
		13.15-17	Exerc. 10 continued		SL	LUH
Thu	7/10	9.15-10	Exerc. 10 continued		SL	LUH
		10.15-17	Exerc. 11: Investigation methods: report writing; reading of a paper on Quaternary stratigraphy (self-study)			
Fri	8/10	9.15-10	Sem. 3: Report writing guidelines; Q&A		Room	SL
		10.15-11	Guest lecture 2: title to be confirmed		Room	
		11.15-17	Report writing			
Mon	11/10		Report writing			
Tue	12/10		Report writing			
Wed	13/10		Report writing			
Thu	14/10		Report writing			
Fri	15/10		Submission of report for fieldtrip 4 by 17.00 to SL (pdf via email)*			
Mon	18/10	8.00-18.00	Exerc. 12: Glacial sedimentology: philosophical summary (self-study, in preparation for seminar 4)			
Tue	19/10	9.15-12	Exerc. 13: Core logging	A, B	SL	SL
		13.15-16	Exerc. 13: Core logging	C, D	SL	SL
Wed	20/10	8.00-20.00*	Fieldtrip 5: Glaciated landsystems II			SL, LUH
Thu	21/10	9.15-12	Lect. 20: Glacial landforms: preservation		Room	SL
		13.15-14	Guest lecture 3: title to be confirmed		Room	
		14.15-16	Sem. 4: Glacial sedimentology: philosophy		Room	SL
Fri	22/10	9.15-12	Sem. 4: Glacial sedimentology: philosophy		Room	SL
		13.15-15	Sem. 5: Course summary, Q&A		Room	SL
Mon	25/10	8.15-8.15-9.00	Sem. 6: Introduction to and start of examination report (home exam)*		Room	SL
Tue	26/10	10.15-11	Q&A; examination report		Room	SL
Wed	27/10		Examination report			
Thu	28/10		Examination report			
Fri	29/10	-16.00	Submission of examination report (home exam) by 16.00 to SL (pdf via email)*			
		16.15-17.00	Sem. 6: Course evaluation and feedback		Room	SL, LUH