

## Animal food science (LV0131) March 20 - June 2, 2024 Preliminary schedule 240221

**Lectures and seminars:** the academic quarter is applied, i.e., we begin quarter past full hour. Please note that rooms for lectures and seminars vary during the course.

**For lab exercises:** academic quarter is NOT applied, please arrive at 9.00, 10.00, and 13.00 o'clock, respectively. The exercises take place in our food laboratory at the Department of Molecular Sciences, 3<sup>rd</sup> floor in the BioCenter building.

**Activities in zoom:** Some activities may take place in zoom, and this may also be an option if lecturers call in sick. Please use the zoom link in the schedule or announced in Canvas.

Date	Time	Activity	Subject and teacher	Room
<b>Week 12</b>				
Wed 20 March	13-15	Introduction	Welcome and introduction. Grading criteria, course literature and schedule (ÅL, MJ)	Ratatosk VHC
Thu 21 March	9-12.00	Lecture	Milk composition and raw milk quality (ÅL)	Sal A132. Ulls hus, A- blocket
	13-15.30	Lecture	Milk from minor dairy species (ÅL)	Sal O1. U- huset
	15.30-16	Assignment	Instructions to literature review in dairy science and technology (ÅL)	Sal O1. U- huset
Fri 22 March	9-12	Lecture	Milk proteins, minerals and lactose (ÅL)	C216. BioC.
	13-16	Lecture	Dairy technology (FL)	Zoom link: <a href="https://slu-se.zoom.us/j/67930175072">https://slu-se.zoom.us/j/67930175072</a> Passcode: 596438 and A402 BioC

<b>Week 13</b>				
Mon 25 March	9-12	Lecture	Rennet and acid induced milk coagulation. Enzymes in milk. (ÅL)	C212. BioC
	12-12.30	Assignment	Group formation; literature reviews (ÅL)	C212. BioC.
Tue 26 March	9-12	Exercise	Group 1. Cheesemaking (MJ)	MolSci
	13-16	Exercise	Group 2. Cheesemaking (MJ)	MolSci
Wed 27 March		Individual studies	Prepare for seminar and literature review	
Thu 28 March		Individual studies	Prepare for seminar and literature review	
Fri 31 March			<i>Easter Friday</i>	

<b>Week 14</b>				
Mon 1 April		<i>Easter Monday</i>		
Tues 2 April	9-12	Lecture	Principles of cheese manufacture (ÅL)	C212. BioC
	13-16	Individual studies	Prepare for seminar and literature review	
Wed 3 April	10-12	Quizz and seminar	Cheese making (ÅL)	C216. BioC
	14-16		Åse in zoom	
Thu 4 April	07.30-16	Study visit to Grådö mejeri, Hedemora. Bus leaves Ultuna at 07.30 from bus parking lot close to the Student Union building. Expected time back at Ultuna 16 o'clock. Host: Linda Karlströms, food agronomist.		
				ÅL, MJ

Friday 5 April	10-12	Lecture	Microstructures and textures in dairy products (JL)	C216. BioC
<b>Week 15</b>				
Mon 8 April	9-16	Individual studies	Prepare for seminar and literature review	
Tue 9 April	9-12	Exercise	Group 2. Milk coagulation (ÅL, MJ)	MolSci
	13-16	Exercise	Group 1. Milk coagulation (ÅL, MJ)	MolSci
Wed 10 April		Individual studies	Prepare for seminar and literature review	
Thu 11 April	9-12	Lecture	Milk fat. Composition, properties, and products (ÅL)	C216. BioC
	14-16		Åse in zoom	
Fri 12 April	10-12	Exercise	Group 1. Whipping properties of cream (ÅL)	MolSci
	13-15	Exercise	Group 2. Whipping properties of cream (ÅL)	MolSci
<b>Note: Friday April 12 is the last day to register in Ladok for the written examination in Dairy science and technology, April 26!</b>				
<b>Week 16</b>				
Mon 15 April	10-12	Quizz and seminar	Milk coagulation (ÅL)	Sal O2. U-huset
	13-16	Lecture	Dairy microbiology and hygiene (ÅL)	C212. BioC
Tue 16 April	10-12	Lecture (external)	Dairy from a nutrient and health sustainability perspective (AS)	C216. bioC.
	13-15	Lecture (external)	Swedish dairy production as part of a sustainable future (VT)	C212. BioC
Wed 17 April	9-12.30	Lecture (external)	Starter cultures and production of fermented dairy products (FR)	C212. BioC

Thu 18 April		Individual studies	Prepare for literature reviews	
	14-16		Åse in zoom	
Fri 19 April	9-11	Quizz and seminar	Whipping properties of cream (ÅL)	C216. BioC
	11.30-13	Exercise	Cheese in theory and practice: together we taste your cheeses as well as other cheese types (ÅL, MJ)	C216. BioC
<b>Week 17</b>				
Mon 22 April	9-12	Seminar	Literature reviews in Dairy Science and Technology (ÅL, MJ)	C212. BioC
	13-16	Seminar	Literature reviews in Dairy Science and Technology (ÅL, MJ)	C212. BioC
Tue 23 April		Individual studies	Prepare for examination	
Wed 24 April		Individual studies	Prepare for examination	
	14-16	Åse in zoom		
Thu 25 April		Individual studies	Prepare for examination	
Fri 26 April	8-11.30	Written examination	Dairy Science and Technology	Tentamensal 2

<b>Week 18</b>				
Mon 29 April	10-11	Introduction	Welcome to meat and fish part. Instructions to literature review, sustainability seminar and internet lectures (GZ)	C212. BioC
	11-12	Lecture	History and purpose of meat (GZ)	C212. BioC
	13-14	Lecture	Muscle morphology and physiology (GZ)	C212. BioC

	14-16	Lecture	Conversion of muscle to meat. Tenderness (GZ)	C212. BioC
Tue 30 April		<i>Valborgsmässoafton</i>		
Wed 1 May		<i>Labour Day</i>		
Thu 2 May	9-12	Lecture	Meat quality; carcass composition and classification (JB)	C212. BioC
	13-16	Lecture in Canvas	Individual studies: Advantages and problems with meat from entire male pigs (GZ)	
Fri 3 May	09-10	Seminar	Meat from entire male pigs (GZ) Formation of groups for literature reviews; meat science and fish quality	C212. BioC
	10-12	Lecture	Meat composition and instrumental measurements. (HP)	C212. BioC
	13-15	Lecture	Lipids in food of animal origin (HH)	C212. BioC
<b>Week 19</b>				
Mon 6 May	08-11	Study visit to Lövsta kött, AB	Bus leaves Ultuna at 8.00 from bus parking lot close to the Student Union building. Expected time back at Ultuna 12 o'clock. Please bring coffee/ fika if you want, there is nothing available at Lövsta (JB/MJ/ÅL)	
	13-14.30	Exercise	Lipids in fish, meat and egg (HH)	C212. BioC
	15-16	Lecture in Canvas	Aspects of meat quality (Individual studies)	
Tue 7 May	9-12	Group 2 Exercise	Meat quality and instrumental measurements (HP, MJ)	MolSci
		Individual studies	Group 1. Preparation sustainability seminar	
	13-16	Group 1 Exercise	Meat quality and instrumental measurements (HP, MJ)	MolSci
		Individual studies	Group 2. Preparation sustainability seminar	

Wed 8 May	9-12	Individual studies	Preparation sustainability seminar	
Thu 9 May		<i>Ascension Day</i>		
Fri 10 May			No teaching	

<b>Week 20</b>				
Mon 13 May	10-12	Lecture	Comparison of fish and mammalian muscle (OK)	C212. BioC
	13-15	Seminar	Meat quality and instrumental measurements (HP)	C212. BioC
	15-16	Individual studies	Meat processing refresher files	
Tue 14 May	8.00-15.00	Study visit to Gudruns chark	Bus leaves Ultuna at 08.00 from bus parking lot close to the Student Union building. Expected time back at Ultuna 15 o'clock. Please bring something for lunch (if you want). There are microwave ovens that you can use at Gudruns, but there will no opportunity to buy lunch. Host: Maja Jonsson, food agronomist (ÅL, MJ)	
Wed 15 May	11-13	Exercise	Meat processing and products: theory and practice (including tasting) (HP)	C212. BioC
Thur 16 May	09-12	Lecture	Introduction to food ethics (HR)	Dvalin, VHC hus 5
	13-16	Lecture	Poultry products (YE&BE, OK)	C212. BioC
Fri 17 May	09-12	Lecture	Fish quality and shellfish products (OK)	C216. BioC
	13-14.30	Exercise Group 2	Fish quality (PG)	MolSci
	14.30-16	Exercise Group 1	Fish quality (PG)	MolSci
<b>Note: Friday May 17 is the last day to register in Ladok for the written examination in Meat science and fish quality June 2!</b>				

Week 21				
Mon 20 May	9-12	Seminar	Sustainability and nutritional value of meat (AK, GZ)	C212. BioC
	13-15	Exercise	Fish products (including tasting) (HP)	C212. BioC
	15-16	Seminar	Fish quality and products (HP)	C212. BioC
Tue 21 May	10-12	Lecture	Egg and egg product quality (OK)	C212. BioC
	13-15	Lecture	Animal foods from a nutritional perspective (BS)	C212. BioC
Wed 22 May	9-16	Individual studies	Prepare literature reviews	
Thu 23 May	9-12	Individual studies	Prepare literature reviews	
Fri 24 May	09-12	Lecture	Food legislation in general; animal food issues related to import and fraud; and food supplements (JJ)	C216. BioC
	13-16		<i>Thesis Day ...</i>	
Week 22				
Mon 27 May	9-12	Seminar	Literature reviews Meat Science and fish Quality (GZ, OK)	Sal A132. Ulls hus, A-blocket
	13-16	Seminar	Literature reviews Meat Science and fish Quality (GZ, OK)	Sal A132. Ulls hus, A-blocket
Tue 28 May	9-16	Individual studies	Prepare for examination	
Wed 29 May	9-16	Individual studies	Prepare for examination	
Thu 30 May	9-16	Individual studies	Prepare for examination	
Fri 31 May	13-16.30	Written examination	Meat science and Fish Quality	Tentamens-sal 2
<i>Please -- fill out the course evaluation!!</i>				

**Types of activities during the course:**

1. In black: lectures. Please note that lectures by specially invited, external teachers, are strongly recommended.
2. In blue: study visits (strongly recommended).
3. In red: compulsory activities, including certain lectures, quizzes, exercises and seminars.
4. In green: independent work associated to literature, study questions, follow-up of exercises, preparations of seminars, literature reviews and examinations.

**Course responsible:**

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Monika Johansson ([monika.johansson@slu.se](mailto:monika.johansson@slu.se))

**SLU lecturers:**

AK Anders Karlsson ([Anders.H.Karlsson@slu.se](mailto:Anders.H.Karlsson@slu.se))

GZ Galia Zamaratskaia ([galia.zamaratskaia@slu.se](mailto:galia.zamaratskaia@slu.se))

HP Hasitha Priyashantha ([hasithapriyashantha@gmail.com](mailto:hasithapriyashantha@gmail.com))

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PG Pontus Gunnarsson ([pontus.gunnarsson@slu.se](mailto:pontus.gunnarsson@slu.se))

ÅL Åse Lundh ([ase.lundh@slu.se](mailto:ase.lundh@slu.se))

**Guest lecturers:**

AS Ann-Kristin Sundin; Lrf Dairy ([ann-kristin.sundin@lrf.se](mailto:ann-kristin.sundin@lrf.se))

BS Birgitta Strandvik; Karolinska Institutet ([birgitta.strandvik@ki.se](mailto:birgitta.strandvik@ki.se))

FL Frida Lewerentz; Lund University ([frida.lewerentz@food.lth.se](mailto:frida.lewerentz@food.lth.se))

FR Fergal Rattray; Novozymes ([fgra@novozymes.com](mailto:fgra@novozymes.com))

JJ Jenny Johansson; National Food Agency Sweden ([jenny.johansson@slv.se](mailto:jenny.johansson@slv.se))

VT Veronica Thuillier; Lrf Dairy ([victoria.thuillier@lrf.se](mailto:victoria.thuillier@lrf.se))

YE Ylva Eriksson; Lantmännen ([ylva.eriksson@lantmannen.com](mailto:ylva.eriksson@lantmannen.com))

**Study visits to dairy and meat processors**

Grådö mejeri; Linda Karlströms, livsmedelsagronom

Gudruns chark; Maja Jonsson, livsmedelsagronom