

Postharvest – biology and technology after harvest, 15hp, vt 2022.

Course leader: Marie Olsson

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All lectures and seminars will be online by Zoom.

In addition, lecture rooms are booked for some lectures for students who prefer to be present in person in Alnarp, Sweden. However, it will depend on the situation with the pandemic to what extent the lectures will also be given IRL. The same goes for the practical classes. Either they will be arranged both in Alnarp, and as an alternative task to be performed at home, or they will be arranged otherwise as distant learning.

Please observe that details in the schedule may be changed

Activities marked in red in the schedule are compulsory

January, week 3 BASIC PRINCIPLES OF POSTHARVEST PHYSIOLOGY AFFECTING QUALITY

17	INTRODUCTION ENGLISH COURSES (for new students) Preliminary Orientation programme Studentwebben (slu.se)	
18	9.15-12.00 Course introduction Lecture (L): Background to quality changes after harvest. Senescence (MO)	13.15-15.00 Tutorial of project – Search and write; introduction and discussion with examples (MO)
19	Project start (individually)	13.15-17.00 Activity/Own studies
20	9.15-12.00 L: How does quality relate to chemical composition? (MO) Texture and taste	13.15-17.00 Project
21	Project	13.15-16.00 L: Quality in relation to factors before harvest (LM)
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Jan./Feb., w4

QUALITY ISSUES, FOOD LOSSES

24	9.15-12.00 L: Food losses in relation to quality (MO)	13.15-17.00 Own studies
25	Project	13.15-17.00 Project
26	9.15-12.00 HACCP and food processing (GH)	13.15-17.00 Activity/Own studies
27	Project	13.15-17.00 Project
28	9.15-12.00 Seminar Food losses Circular bioeconomy (MO)	13.15-17.00 Own studies
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February, w5 FRUIT RIPENING AND STORAGE DISEASES

31	9.15-12.00 L: Fruit ripening Maturity indices	13.15-17.00 Project
1	9.15-12.00 Project	13.15-17.00 Project
2	9.15-12.00 L: Physiological diseases (LG); Plant pathology after harvest	13.15-17.00 Activity/Own studies
3	9.15-12.00 Practical class – Maturity indices in practice, plant pathology (HPH/LG) (or own task according instructions online)	13.15-17.00 Project: Submit project at latest today!
4	9.15-12.00 Preparation for presentations and opposition	13.15-15.00 Students' presentations of project (MO)
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February, w6 TECHNOLOGY PRESERVING POSTHARVEST QUALITY:

7	Own studies	13.15-17.00 L: Cooling technology and water loss (LM)
8	Own studies	13.15-17.00 Own studies
9	9.15-12.00 L: CA, DCA, MAP (HPH)	13.15-17.00 Activity/Own studies
10	Own studies	14.00-16.00 Packbridge seminar About Packbridge - Connecting the world of Packaging - Packbridge AB
11	9.15-12.00 L: Packaging and handling (LN)	13.15-17.00 Own studies

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February, w7 INNOVATION AND PROCESSING

14	9.15-11.00 L: New products – Which will succeed? (MO) 11.15-12.00 Introduction till 16-17/2 (GH)	13.15-17.00 Own studies
15	9.15-12.00 Product development theoretic models (GH)	13.15-17.00 Own studies
16	9.15-12.00 <i>Food Lab</i> Development of prototypes (GH) Practical class Food technology (or own task according instructions online)	13.15-17.00 Activity/Own studies Practical class Food technology (GH)
17	9.15-12.00 <i>Food Lab</i> <u>Back-up</u> Practical class Food technology (GH) (or own task according instructions online)	13.15-17.00 Own studies
18	9.15-12.00 Own studies	13.15-17.00 Own studies
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February, w8 **DESIRABLE AND UNDESIRABLE QUALITY ATTRIBUTES; NUTRITION**

21	9.15-12.00 Own studies	13.15-17.00 Own studies
22	9.15-12.00 L: Human nutrition and importance of horticultural products (MO)	13.15-17.00 Own studies
23	8-17 RE-EXAMINATION (other courses)	8-17 RE-EXAMINATION (other courses)
24	9.15-12.00 Own studies	13.15-17.00 Own studies
25	9.15-12.00 L: Food safety (MO) Introduction to next week's task about new postharvest technology	13.15-17.00 Own studies
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March, w9 FOOD TECHNOLOGY AND NEW TECHNOLOGY

28	9.15-12.00 Own studies	13.15-17.00 Own studies
1	8.15-12.00 <i>Food Lab (GH)</i> (times to be announced) Practical class Food technology	13.15-17.00 Practical class Food technology
2	9.15-12.00 Students' own literature search regarding new postharvest technology	13.15-17.00 Activity/Own studies
3	9.15-12.00 Study visit online	13.15-17.00 Own studies
4	9.15-12.00 Seminar new technology Introduction case, v. 12 (MO)	13.15-17.00 Own studies
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March, w10 SUMMARY AND STUDIES FOR WRITTEN EXAMINATION

7	9.15-12.00 Own studies	13.15-17.00 Own studies
8	9.15-12.00 Own studies	13.15-17.00 Own studies
9	9.15-12.00 Seminar; questions before examination (MO) (not compulsory)	13.15-17.00 Activity/Own studies
10	9.15-12.00 Own studies	13.15-17.00 Own studies
11	9.15-12.00 WRITTEN EXAMINATION	13.15-17.00 Own studies

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March, w11 POSTHARVEST HANDLING IN PRACTICE / Case studies of chosen product

14	9.15-12.00 Start case (MO)	13.15-17.00 Case studies
15	9.15-12.00 Case studies	13.15-17.00 Case studies
16	9.15-12.00 Case studies	13.15-17.00 Activity/Own studies
17	9.15-12.00 Case studies	13.15-17.00 Case studies
18	9.15-12.00 Seminar case studies	13.15-17.00 Own summary
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March, w12

21	Study visit online (time to be announced later)	
22	9.15-12.00 Preparation for students' presentations (individually)	13.15-17.00 Preparation for students' presentations (individually)
23	9.15-12.00 Students' presentations (GH/MO)	13.15-17.00 Course evaluation

Activity / own studies in Wednesday afternoons means student's own studies or other activity arranged by e.g. Student union.

Compulsory for approved grade (3, 4, or 5) of the course:

- Participation in seminars (not including the seminar March 9th)
- Participation in study visits online
- Approved grade of individual project (including presentation and opposition).
- Approved case study (including presentation).
- Participation in practical classes or tasks
- Approved result of the written examination

If needed, re-examination of the written examination will take place February 23rd.

Grade for whole course (3, 4, 5, not approved): 75% written examination; 25% individual project.

All other compulsory tasks will have grades approved / not approved.