Sveučilište u Zagrebu Agronomski fakultet
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Specifities of postharvest technology of fruit crops (296618)

Nositelj kolegija

prof. dr. sc. Tomislav Jemrić

Opis kolegija

On this module student acquire knowledge of physiological and biochemical processes in fruits after harvest of main fruit species. This module deals with cooling procedures, postharvest treatments in purpose of maintaining fruit quality and improvement of storability, physiological disorders that occur during storage, sorting and packing. On exercises students will learn how to recognize physiological disorders for specific fruit species. They will also visit cold storage facility where they will be familiarized with technological processes of storage and packing fruits.

ECTS: **6.00**

E-učenje: **R1**

Sati nastave: 60
Predavanja: 36
Laboratorijske vježbe: 16
Seminar: 8

Izvođač predavanja

- prof. dr. sc. Tomislav Jemrić

Izvođač vježbi

- dr. sc. Marko Vuković

Izvođač seminara

- dr. sc. Marko Vuković

Ocjenjivanje

Dovoljan (2): 60 %
Dobar (3): 70 %
Vrlo dobar (4): 80 %
Izvrstan (5): 90 %

Vrsta kolegija

- Graduate studies / MS Courses taught in English (Izborni kolegij, 1. semestar, 1. godina)

Opće kompetencije

Student achieves necessary theoretical and practical knowledge needed for work in the field of storage, distribution and placement of different types of fruits on market.

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Oblici nastave

- Lectures
- Laboratory practice/exercises
  On exercises students master recognition of symptoms of physiological disorders of different fruit species and they also get familiar with procedures after harvest that are specific for fruit species.
- Seminars
  Students independently prepare and present a subject related to the subject of this module

Ishodi učenja i način provjere

Ishod učenja	Način provjere
to know physiological processes in main fruit species after harvest	written or oral exam
distinguish the fruit storage systems for specific fruit species	written or oral exam, laboratory task
explain and implement achieved knowledge and skills in fruit storage of different fruit species	written or oral exam
present results of some activities that are related to fruit storage	laboratory work, seminar

Način rada

Obveze nastavnika

Keeping lectures, exercises and seminars

Obveze studenta

Regular attendance to classes, regular attendance to the exams, regular fulfillment of obligations, regularly done laboratory task, positively evaluated seminar

Polaganje ispita

Elementi praćenja	Maksimalno bodova ili udio u ocjeni	Bodovna skala ocjena	Ocjena	Broj sati izravne nastave	Ukupni broj sati rada prosječnog studenta	ECTS bodovi
Laboratory task	15%			20	8	2
Seminar	10%			4	8	1
1. midterm exam	38%			18	16	1,5
2. midterm exam	37%			18	16	1.5
Final exam	75%			35	32	3
Total	100%			60	48	6

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Elementi praćenja	Opis	Rok	Nadoknada
Seminar	Write a seminar with at least 15 scientific relevant references in accordance with the received instructions and within the deadline set it on the system for e-learning	According to the agreement with the teacher	Obliged work off of the exercises
1. midterm exam	Answer correctly to at least 60% of the questions in the system for e-learning	According to the agreement with the teacher	Obliged to pass the exam
2. midterm exam	Answer correctly to at least 60% of the questions in the system for e-learning	According to the agreement with the teacher	Obliged to pass the exam
Final exam	Answer correctly to at least 60% of the questions in the system for e-learning or satisfactory answer to questions in oral exam	According to the agreement with the teacher	If midterm exams are passed final exam is not obliged

Tjedni plan nastave

1. Course introduction, analysis of cold store capacity for fruits in the world and in the Republic of Croatia, the role of fruit storage in fruit production chain.
2. Morphological and physiological characteristics of fruits
3. Morphological and physiological characteristics of fruits The morphological and physiological characteristics, physiological disorders of pome fruits
4. The optimal harvest date, the specifics of pome fruit storage, postharvest procedures for pome fruit
5. The morphological and physiological characteristics, physiological disorders of stone fruits
6. The optimal harvest date, the specifics of stone fruit storage, postharvest procedures for stone fruit
7. The morphological and physiological characteristics, optimum harvest date, the specifics of storage, postharvest procedures, physiological disorders of nuts
8. The morphological and physiological characteristics, optimum harvest date, the specifics of storage, postharvest procedures, physiological disorders of berries
9. The morphological and physiological characteristics, optimum harvest date, the specifics of storage, postharvest procedures, physiological disorders of citrus fruits
10. The morphological and physiological characteristics, optimum harvest date, the specifics of storage, postharvest procedures, physiological disorders of banana
11. The morphological and physiological characteristics, optimum harvest date, the specifics of storage, postharvest procedures, physiological disorders of kiwi fruit
12. The morphological and physiological characteristics, optimum harvest date, the specifics of storage, postharvest procedures, physiological disorders of tropical fruits
13. Preparation and presentation of student's seminar papers
14. A visit to a cold store and a practical introduction to technological processes during storage, packaging and distribution of fruits and ripening bananas
15. Exam

Obvezna literatura

1. Lovrić, T., Piližota V. 1994.: Konzerviranje i prerada voća , Nakladni zavod Globus, Zagreb

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Preporučena literatura

1. Kader, A.A., ed. 2002. Post-harvest technology of horticultural crops. Oakland: University of California, Division of Agriculture and Natural Resources Publication 3311
2. Wills, R., McGlasson, B., Graham, D., Joyce, D. 1998. Postharvest: An Introduction to the Physiology & Handlingof Fruit, Vegetables and ornamentals, University of New south Wales Press Ltd., Sydney

Sličan kolegij na srodnim sveučilištima

- Postharvest physiology and technologies of fruit species, Faculty of Horticultural Science, Corvinus university of Budapest, Hungary

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