



Univerza v Mariboru

Fakulteta za naravoslovje  
in matematiko

### UČNI NAČRT PREDMETA / COURSE SYLLABUS

<b>Predmet:</b>	<b>Ekološko kmetijstvo</b>
<b>Course title:</b>	Organic Agriculture

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Biologija in ekologija z naravovastvom, 2. stopnja	/	1,2	Poletni / Zimski
Biology and Ecology with Nature Conservation, 2 <sup>nd</sup> cycle	/	1,2	Summer / Winter

**Vrsta predmeta / Course type**

**Univerzitetna koda predmeta / University course code:**

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Teren. vaje Field work	Samost. delo Individual work	ECTS
15	15	10		5	135	6

**Nosilec predmeta / Lecturer:**

**Jeziki / Predavanja / Lectures:**   
**Languages: Vaje / Tutorial:**

**Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:**

**Prerequisites:**

**Vsebina:**

**Content (Syllabus outline):**

Osnovni cilji, definicije in znanstvene podlage ekološkega kmetijstva ter zakonodaja  
 Zgodovina in razvoj ekološkega kmetijstva v svetu in pri nas  
 Položaj in pomen ekološkega kmetijstva v okviru kmetijskih okoljskih ukrepov  
 Preusmeritev v ekološko kmetijstvo in vzdrževanje trajnostnega sistema  
 Osnovne zahteve ekološkega kmetijstva po panogah in problemi ob preusmeritvi  
 Uravnavanje ekološkega ravnotežja v rastlinski pridelavi (rodovitnost tal, kroženje hranil, prehrana, pleveli, bolezni, škodljivci – koristni organizmi, energija,...)  
 Osnovne zahteve in specifičnosti ekološke reje živali  
 Smernice za ekološko kmetovanje (nadstandardi)  
 Kontrola in certifikacija ekološke predelave, uvoza in prometa z ekološkimi pridelki oz. živali  
 Ekološko kmetijstvo v SKP in akcijski načrt  
 Notranja kakovost in pomen ekoloških živil v prehrani ljudi  
 Regionalni, tradicionalni, geografski, sociološki, etnološki... vidiki uspešnosti pridelave in trženja ekoloških proizvodov ter vizije razvoja ekološkega kmetijstva na regionalni in globalni ravni

The aims, definitions and scientific bases of organic farming incl. law requirements  
 History and development of organic farming in the World and in Slovenia  
 Role and impact of organic farming on agro-environmental measures  
 Conversion into organic farming and maintenance of sustainable development  
 Basic requirements of organic farming in different branches and expected problems during conversion  
 Management of ecological equilibrium in plant production (soils, nutrient cycling, fertilizing, weeds, pests and diseases – useful organisms, energy,...)  
 Requirements in organic animal production  
 Different guidelines for organic farming (Demeter, Biodar,...)  
 Inspection and certification  
 Organic farming in CAP and action plans  
 Quality of organic products and impact of organic foods in nutrition  
 Regional, traditional, geographic, social, ethnological etc. views of organic production and marketing  
 Vision of organic farming development on regional and global level

### Temeljna literatura in viri / Readings:

#### Temeljni viri / Basic

Bavec M., F. Bavec Impact of organic farming on biodiversity. V: YUEH-HSIN, Lo (ur.). *Biodiversity in ecosystems - Linking structure and function*. Rijeka: InTech. 2015

#### Priporočeni viri / Recommended:

Bavec F., M. Bavec, 2006: *Organic Production and Use of Alternative Crops*, Taylor & Francis CRC Press, Boca Raton, New York, London.

Bavec, M. in sod. 2000. *Ekološko kmetijstvo*. ČZD Kmečki glas, Ljubljana.

Lampkin, N., 1994: *Organic farming*. Farming press, Ipswich, UK.

Freyer B., 2016: *Ökologischer Lanbau. Grundlagen, Wissensstand und Herausforderungen*. Utb. Koln, Toronto, New York.

Robačar M. s sod., 2018: *Koraki do zaupanja vredne (certificirane) ponudbe ekološke hrane v gastronomiji*. 1. izd. V Mariboru: Univerzitetna založba Univerze

Standardi IFOAM in ekoloških združenj, *Zakonodaja s področja ekološkega kmetijstva Regulation*

(EU) 848/2018

Izbrani članki / Selected papers from Web of Science in Science Direct.

**Cilji in kompetence:**

- Poznavanje in razumevanje utemeljitev ter razvoja ekološkega kmetijstva
- Sposobnost analize, sinteze in predvidevanje rešitev ter posledic konvencionalnega v primerjavi z ekološkim kmetijstvom
- Razumevanje in prepoznanje ekološke pridelave, predelave ter ekološke hrane

**Objectives and competences:**

- Get basic knowledge, understand justifying and development of organic farming
- Ability to analyze, synthesize and predict the solutions and consequences of conventional versus organic farming
- Understanding and recognizing organic production, processing and organic food

**Predvideni študijski rezultati:**

Po uspešno opravljeni učni enoti naj bi študenti:

- znali predstaviti zahteve in prednosti ekološkega kmetijstva ter razlikovati ekološke produkte od konvencionalno ali integrirano pridelanih;
- razumeli sistem ekološke pridelave, predelave, kontrole, certifikacije ter verodostojnosti certifikata.

**Intended learning outcomes:**

By the end of this course, students should be able to:

- represent requirements and advantages of organic agriculture, such as differentiate products from conventional and integrated production systems;
- understand organic production system, inspection and certification, such as validity of certificate.

**Metode poučevanja in učenja:**

- Predavanja
- Vaje
- Projektno delo in seminarsko delo
- Terenske vaje

**Learning and teaching methods:**

- Lectures
- Tutorial
- Project work and seminar work
- Field work

**Načini ocenjevanja:**

- Način (pisni izpit, ustno izpraševanje, naloge, projekt):
- Seminarska naloga
  - Pisni izpit

Delež (v %) /

Weight (in %) **Assessment:**

- Type (examination, oral, coursework, project):
- Seminar essay
  - Written exam

50%

50%

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## Reference nosilca / Lecturer's references:

BAVEC, Franc, LISEC, Urška, BAVEC, Martina. Importance of underutilized field crops for increasing functional biodiversity : Chapter 18. V: ŞEN, Bülent (ur.), GRILLO, Oscar (ur.). *Selected studies in biodiversity*. London, UK: IntechOpen. cop. 2018, str. 377-388, graf. prikazi. [COBISS.SI-ID [4464684](#)]

BAVEC, Martina, ROBAČER, Martina, STAJNKO, Denis, VUKMANIČ, Tjaša, BAVEC, Franc. Sustainability of vegetable production systems evaluated by ecological footprint. V: *Good agricultural practices for greenhouse vegetable production in the South East European countries : Principles for sustainable intensification of smallholder farms*, (FAO Plant production and protection paper, 230). Rome: Food and agriculture organization of the United Nations. 2017, str. 227-243, ilustr. [COBISS.SI-ID [4330284](#)]

VREŠAK, Martina, OLESEN, Halkjaer M., GISLUM, René, BAVEC, Franc, JØRGENSEN, Ravn J. The use of image-spectroscopy technology as a diagnostic method for seed health test and variety identification. *PloS one*, ISSN 1932-6203, 2016, vol. 11, no 3.  
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0152011>,  
<https://dk.um.si/lzpisGradiva.php?id=66305&lang=slv>, doi: [10.1371/journal.pone.0152011](https://doi.org/10.1371/journal.pone.0152011).  
[COBISS.SI-ID [4131884](#)], [JCR, SNIP, WoS do 14. 4. 2019]

ROBAČER, Martina, CANALI, Stefano, LAKKENBORG KRISTENSEN, Hanne, BAVEC, Franc, GROBELNIK MLAKAR, Silva, JAKOP, Manfred, BAVEC, Martina. Cover crops in organic field vegetable production. *Scientia horticulturae*, ISSN 0304-4238. [Print ed.], 2016, vol. 208, str. 104-110, doi: [10.1016/j.scienta.2015.12.029](https://doi.org/10.1016/j.scienta.2015.12.029). [COBISS.SI-ID [4060716](#)], [JCR, SNIP, WoS do 13. 1. 2019]

VAN HOED, Vera, SAMPAIO, Araujo Klicia, FELKNER, Barbara, BAVEC, Franc, SCIPPO, Marie-Louise, BROSE, François, BAVEC, Martina, VERHÉ, Roland. Tocopherols and polyphenols in pumpkin seed oil are moderately affected by industrially relevant roasting conditions. *European Journal of Lipid Science and Technology*, ISSN 1438-9312. [Online ed.], 2017, vol. 119, iss. 12, str. 1-9, doi: [10.1002/ejlt.201700110](https://doi.org/10.1002/ejlt.201700110). [COBISS.SI-ID [4345900](#)], [JCR, SNIP, WoS do 29. 12. 2017]