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| Course: | **APPLIED ENTOMOLOGY** |
| Course id: 3МFM1О02 |
| Number of ECTS: 5 |
| Teachers: | Aleksandra Ignjatović Ćupina, PhD, Assist. Professor; Radmila Almaši, PhD, Professor; Pero Štrbac, PhD, Professor, Tatjana Kereši, PhD, Assoc. Professor; Aleksandra Popović, MSc, assistant |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| 1. Educational goal

Enabling of the use of basic entomological knowledge in applied research and practice. Introduction to recent theoretical and practical achievements, integrated pest management, national and European phytosanitary legislation, quarantine and quarantine pests. |
| 1. Educational outcomes

Acquisition of basic skills for professional application of the knowledge, transfer of information and practical solutions, individual skills in scientific, educational and research work. Acqisition of skills for solving theoretical and practical problems related to identification, monitoring and control of pest insect species in accordance with the concept of Integrated Pest Management; signalization of the emergence of invasive pest species; prevention of their appearance and dispersion, application of quarantine laws. |
| 1. Course content

*Theoretical classes:* Systematics, morphology, biology, physiology, ecology, behavior and damages; techniques of collection of certain insect groups with agricultural, veterinary and medical importance. Strategies of host selection. Impact of ecological factors to adaptation to anthropogenic-born and habitat changes. Quarantine and invasive pest insect species, possibilities of prevention of their introduction, establishment and dispersion. Decision Supporting Systems (forecasting models, long-term and short-term forecasting, expert systems and warning systems). International, European and national regulations on quarantine and mandatory control. Phytosanitary Quality of Plant Propagation Material, sanitation and certification. Integral approach to pest insects control, based on real biological and economical needs (damage threshold). Preventive and direct control strategies in agriculture sectors (field and vegetable production, fruit production and viticulture, product storage and transport), veterinary and medicine. Biological control, definition, regulations, strength and weakness aspects. Adaptation of control methods in relation to anthropogenic condition changes, climate trends, changes in pest composition, abundance and occurrence of invasive species.*Practical classes:* Practical classes are based on individual and group interactive work, with the objective of detailed introduction to basic and practical aspects of the mentioned fields of entomolog: training in insect identification by the use of identification keys, diagnosis, localisation and observation of attack symptoms, caused by different insect stages activity over the season and depending on the plant host phenophases. |
| 1. Teaching methods: Theoretical and practical classes; interactive individual and group work; demonstrative- seminar papers
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| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture attendance | Yes | 10 | Oral exam | Yes | 50 |
| Test | No |  |  |
| Exercise attendance | Yes | 10 |
| ColloquiumSeminars | Yes | 1515 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Štrbac P.& Ignjatović Ćupina A. | Entomologija, poznavanje, praćenje, sakupljanje i suzbijanje štetnih insekata | Poljoprivredni fakultet u Novom Sadu, štamparija Pet-Pak Novi Sad | 2000 |
|  | Štrbac P. | Metode utvrđivanja prisutnosti i ocena intenziteta pojave štetočina u biljnoj proizvodnji | Poljoprivredni fakultet u Novom Sadu | 2004 |
|  | Štrbac P. | Štetočine uskladištenih proizvoda i njihova kontrola | Poljoprivredni fakultet Novi Sad, štamparija Feljton Novi Sad | 2002 |
|  | Almaši R., Injac M. & Almaši Š. | Štetni i korisni organizmi jabučastih voćaka | Poljoprivredni fakultet Novi Sad | 2004 |
|  | Štrbac P. | Štetočine u ratarsko-povrtarskoj proizvodnji | Poljoprivredni fakultet Novi Sad | 2005 |
|  | Ignjatović Ćupina A. & Petrić D. | Kljič za familije nadklase Hexapoda | Poljoprivredni fakultet, Univerzitet u Novom Sadu, CD izdanje | 2012 |
|  | Kolektiv autora | Priručnik prognozno-izveštajne službe u zaštiti poljoprivrednih kultura | Društvo za zaštitu bilja Jugoslavije, Beograd | 1983 |
|  | Štrbac P. | Opšte metode prognoze štetočina u biljnoj proizvodnji | Poljoprivredni fakultet Novi Sad | 2005 |
|  | Takken W. & Knols Bart G.J. | Emerging pests and vector-borne diseases in Europe. Vol. 1.Ecology and control of vector-born diseases. | Wageningen Academic Publishers | 2007 |
|  | David V. Alford | Pests of Fruit Crops | Cambridge, UK, Manson Publishing | 2007 |
|  | Sekulić R., Spasić R., Kereši T. | Štetočine povrća i njihovo suzbijanje | Poljoprivredni fakultet Novi Sad, Poljoprivredni fakultet Beograd, Institut za ratarstvo i povrtarstvo Novi Sad | 2008 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationMASTER ACADEMIC STUDIES IN PLANT MEDICINE |
| Table 5.2 Course specification |