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| Course: | **Ecological Bases of Plant and Environmental Protection** |
| Course id:  |
| Number of ECTS: 6 |
| Teacher: | Prof. Marija Zgomba, M.Sc Dušan Marinković |
| Course status  | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes:2 | Other teaching types:- | Study research work:- | Other classes:- |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

To develop agro tourism it is necessary to provide ecologically available environment. In Plant protection strategy, high standards in respect to maximum level of pesticide both within treated plants and food as well as within agro eco system have to be fulfilled. Only with basic knowledge on pesticide -food chain interaction/consequences and environmental impact of pesticide/biocide used, the students will be able to comprehend and appreciate a sound approach to the healthy environment. A brief overview of the pests and biological agents that cause damage within rural and urban environment will be demonstrated. The environmental acceptable approach in controlling/suppressing pests will be revealed. |
| 1. Educational outcomes

Knowledge acquainted within the program of the subject will enable students to distinguish aspects of offered possibilities to protect plants and rural/urban environment. The threshold for different pests and microbials as a basis for decision making towards the safe and environmentally friendly pesticide/biocide treatments. The contemporary methods in controlling vectors of human and animal health are presented. The major invasive plant and insects’ species that are new to Europe are illustrated and described. The evidence of hazards both to humans and environment is demonstrated through examples from Agriculture, Rural and Environment. Importance of their control up to the threshold level is demonstrated. The teaching program should enable students to develop response to aspects impacting the environment and widen approaches for judiciousness in rational plant and environment protection.  |
| 1. Course content

*Theoretical approach* Biological agents and their harmful impact on plants with the symptoms of diseases. Synantropic insects; insects and humans associations (cockroaches, flies, flee, ants, bags). Plant pests- damages and losses in agriculture and forestry, hematophagous insects and their vector capacity and role in public health. Their feeding preference as vectors (antropophilic, zoophilic) The selection of methods to suppress the populations under the threshold level (preventive measuresas in urban and rural environment, sanitation of infected objects/sites). Integrated approach in controlling biological agents/pathogens, insects, pests and weeds (physical, mechanical and personal protection tools) Insecticides, Insect Growth Regulators, Bioinsecticides, Attractants and Repellents. Basic presentation of different mode of action mechanism in various products. Rational pesticides use/application, products selectivity, and biodiversity protection/management. *-Practical teaching* Methods used to determine pest/synantropic insects, mouth parts, feeding aparatous, vectors capacity. Bio-ecology characteristic of special sites important as reservoirs of insect pests, vectors and weeds. Demonstration of various products used in control programs and different application techniques. Chemical, Biological and Integrated methods in conjunction with lethal doses, lethal concentration, pre-caution measurements in handling and application of pesticides/biocides and personal protection.  |
| 1. Teaching methods

 Lectures, Practice/ Practical classes, Demonstrations,Consultations,  |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam (izabrati) | Mandatory | Points |
| Lecture attendance | Yes | 5 | *Theoretical part of the exam Oral*  | Yes | 60 |
| Test | Yes | 15 |  |
| Exercise attendance | Yes | 20 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  |  Petrić, D**.**, Zgomba, M., Bellini, R. and Becker N. | Surveillance of Mosquito Populations: A Key Element to Understanding the Spread of Invasive Vector Species and Vector-Borne Diseases in Europe.  | *Nova Science Publishers* | 2012 |
|  | Becker N., Petrić D**.**, Zgomba M., Boase C., Madon M., Dahl C. and Kaiser A | Mosquitoes and their control. Second Edition | Springer Verlag, Heidelberg ISBN 978-3-540-92873-7. | 2010 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationUNDERGRADUATE ACADEMIC STUDIESAGRICULTURAL TOURISM AND RURAL DEVELOPMENT |
| Table 5.2 Course specification |