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| Course: | Genetic Resistance to Plant Diseases and Pests |
| Course id: 3МFM1I09 |
| Number of ECTS: 5 |
| Teachers: | Miodrag D. Dimitrijević, PhD, professor; Sofija R. Petrović, PhD, professor; Borislav M. Banjac, MSc, assistant |
| 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 |
| 1. Educational goal

The goal of this course is to achieve scientific and academic skills, develop creative skills and mastery of specific practical skills needed for the future development of the careers that are in line with modern developments. The course provides knowledge of the genetic base of plant resistance to diseases and pests |
| 1. Educational outcomes

Developing the ability of students to follow modern achievements in science and profession, developing the ability to understand and solve problems related to genetic mechanisms of plant resistance, complex relations between genetic backgrounds of host, pathogen and the environment, as well as, methods of testing and selection criteria for plant resistance in a breeding process. |
| 1. Course content

*Theoretical classes:*Types and sources of plant resistance to diseases; Active or real genetic resistance; Gene systems for vertical and horizontal resistance; Plant-pathogen co-evolution; Variation in pathogen populations and methods to manage plant resistance; Resistance to bacteria; Resistance to viruses; Resistance to insects; Disease resistances in most important agricultural crops; Methods for testing and selecting for plant resistance to diseases*Practical classes:* Practical classes are conducted during the exercise program and monitor and follow the lecture topic |
| 1. Teaching methods

Classes are conducted using modern techniques. Theoretical part of teaching is done in university classrooms. All lectures are computer processed and presented. Practical training takes place in the work of the cabinet for an air-conditioned room is equipped with individual seats for students (40 seats), which is equipped with computers, video projectors and microscopes |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture attendance | Yes | 5 | Written part of the exam Oral part of the exam | YesYes | 3030 |
| Test | Yes | 30 |  |
| Exercise attendance | Yes | 2.5 |
| Seminars | Yes | 2.5 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Borojević S.& Borojević K. | Genetics | University of Novi Sad, Novi Sad | 1976 |
|  | Borojević S | Principles and methods of plant breeding | RU "Ćirpanov", Novi Sad | 1981 |
|  | Kraljević-Balalić M., Petrović S., Vapa, Lj. | Genetics.Theoretical basics with problems. | Faculty of Agriculture, Institute of Field and Vegetable Crops and Science, Novi Sad | 1991 |
|  | Dimitrijević M. & Petrovic S. | Population genetics. Adaptability and stability of genotypes.  | Faculty of Agriculture and the Institute of Field and Vegetable Crops, Novi Sad | 2005 |
|  | Marinković M., Tucić N., Kekić V.  | Genetics | Scientific Book, Belgrade | 1982 |
|  | Dimitrijević M. & Petrovic S. | Genetically modified organisms. Questions and dilemmas. | Green Network of Vojvodina, Novi Sad  | 2004 |
|  | Bošković J. & Isayev V. | Genetics  | Megatrend University, Belgrade  | 2007 |

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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 |