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| Course: | **Principles of Genetic Manipulation** |
| Course id:3МГО1О01 |
| Number of ECTS:6 |
| Teacher: | Full professors:dr Miodrag Dimitrijević, dr Sofija Petrović Teaching assistant: dr Borislav Banjac |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures:45 | Practical classes:45 | Other teaching types:0 | Study research work:0 | Other classes:0 |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

The aim of the course is to introduce students with the general genetic processes and principles and to connect them with the specific methods of gene manipulation in the process of plant breeding. |
| 1. Educational outcomes

Students who successfully complete the course is qualified for further development through doctoral studies in the direction of scientific work in a variety of genetic disciplines, as well as scientific and professional work in plant breeding. |
| 1. Course content

Introductory lecture ; Selecting genes for genetic manipulation of agricultural species; The structure of the genetic material; Basics of inheritance; Sources of genetic variability; Mutations; Changes in chromosome number; The crosses taxonomically distant parents; Creating genetic variability; Changes in the structure of chromosomes; The basic principles of genetic engineering; Transgenic plants |
| 1. Teaching methods

Lectures, Consultations, Research work. |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam | Mandatory | Points |
| Lecture attendance | Yes | 5 | *Written part of the exam-tasks and theory+Oral part of the exam/* | Yes | 30+30 |
| Test | Yes | 3x10 |  |
| Exercise attendance | Yes | 2.5 |
| *Term paper* | Yes | 2.5 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Borojević S., Borojević K. | Genetika | University of Novi Sad, Faculty of Agriculture | 1976 |
|  | Dimitrijević M., Petrović S. | Genetički modifikovani organizmi-pitanja i dileme | Zelena mreža Vojvodine, Novi Sad | 2004 |

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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 *Genetics, plant breeding and seed production* |
| Table 5.2 Course specification |