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| Course: | **Molecular Genetics I** |
| Course id:3МГО1И09 |
| Number of ECTS:6 |
| Teacher: | Full professors:dr Miodrag Dimitrijević, dr Sofija Petrović Teaching assistant: dr Borislav Banjac |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures:30 | Practical classes:30 | 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 basis of molecular genetics (nucleic acids structure and function of genetic material, gene manipulation and manipulation of gene products). |
| 1. Educational outcomes

Students who successfully complete course is qualified for further development through doctoral studies in the direction of gene manipulation, as well as scientific and professional teamwork.  |
| 1. Course content

Cells; DNA and chromosomes; Structure, expression, and function of the gene; Movable genetic elements; DNA replication;DNA repair and recombination; RNA; Transcription; Translation; Control of gene expression; The gene regulatory mechanism; Manipulation of proteins, RNA and DNA; The isolation, cloning and sequencing DNA |
| 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 |
|  | Old R.W., Primrose B.S | Principles of Gene Manipulation – An Introduction to Genetic Engeenering | Blackwell Scienitific Publications | 1985 |
|  | Primrose B. S.,Twyman R. M.  | Principles of Gene Manipulation – An and Genomics | Blackwell Publishing | 2006 |

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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 |