

No.	Subject code	Subject name	Semester	Subject status	Active lectures			ECTS
					P	SIR	OTHER	
First year								
1.		Elective subject	1	E	5	5		15
2.		Elective subject	1	E	5	5		15
3.		Elective subject	2	E	5	5		15
4.		Elective subject	2	E	5	5		15
Total number of active classes and points in a year					20	20		60
Second year								
1.		Elective subject	3	E	5	5		15
2.		Elective subject	3	E	5	5		15
3.	DMB-S1	Seminar 1	4	C	0	20		30
Total number of active classes and points in a year					10	30		60
Third year								
1.	DMB-S2	Seminar 2	5	C	0	20		30
2.	DMB-R1	Preparation of a scientific paper for publication in a journal from the SCI list	6	C	0	20		10
3.	DMB-DD	Doctoral dissertation work	6	C	0	0		20
Total number of active classes and points in a year					0	40		60
Total number of active classes and points in a study program					30	90		180
<p>Note:</p> <ol style="list-style-type: none"> Duration of studies is 3 years and 180 points Active lecturing is lectures and SIR, minimum 20 classes per semester in all years Total lectures in the first 2 years, minimum 45 classes or 25% of total number of active lecturing lessons The third year is only study research or independent research work Number of points per year is minimum 60 								

Conditions regarding the preparation of the doctoral dissertation – doctoral art project

Narrow scientific area	Description of conditions related to the preparation of a doctoral dissertation
Molecular Biology	<p>Doctoral dissertation is the most important part of doctoral studies. It represents student's independent research work and a synthesis of theoretical knowledge and practical work through which the student acquires the capacity for scientifically based interpretation of experimental data. Doctoral dissertation in Biology is conducted in narrow scientific area of Molecular Biology, which can be realized at the Faculty of Sciences in Novi Sad. By developing and defending a doctoral dissertation, the student confirms independence, originality and creativity in the application of theoretical and practical knowledge in selected biological discipline. In order to defend the doctoral dissertation, student must pass 6 elective courses (total of 90 ECTS), two compulsory Seminars and publish at least one scientific paper in the SCI journal and one scientific paper in the national journal of category M50 or in the SCI journal from the field of doctoral dissertation, which contains the results obtained from the work on the doctoral dissertation and on which the student is the first author.</p> <p>The doctoral dissertation proposal is submitted during the second or third year of the doctoral studies. In total doctoral dissertation provides 90 ECTS. Detailed procedure of the application, development and defense of the doctoral dissertation are provided in the Statute and the corresponding acts of the Faculty of Sciences.</p>

List of subjects in doctoral studies

No.	Code	Subject name	Name of the teacher(s)	Semester	ECTS	NSA or NAA	T
1.	DMB001	Biochemical and molecular systematic of	Anačkov T. Goran, Božin N.	1	15	Botany	E

		plants	Biljana Aleksić M. Jelena				
2.	DMB002	Modern chromatographic methods in biology	Kojić K. Danijela, Pejin M. Boris	1	15	Biochemistry	E
3.	DMB003	Biochemistry and molecular biology of insects	Popović D. Željko Vukašinić L. Elvira	1	15	Biochemistry/Molecular Biology	E
4.	DMB004	Integrative physiology	Čelić V. Tatjana	1	15	Animal Physiology	E
5.	DMB005	Reproductive toxicology	Andrić Lj. Nebojša, Pogrmić- Majkić I. Kristina	1	15	Biology	E
6.	DMB006	Advanced plant genetics	Kočiš Tubić Nataša	1	15	Genetics	E
7.	DMB007	Genomic methods in genetic analyses	Đan R. Mihajla, Veličković N. Nevena	1	15	Genetics	E
8.	DMB008	Developmental origins of health and disease and epigenetics	Fa B. Svetlana	1	15	Animal Physiology	E
9.	DMB009	Mitochondrial dynamics	Andrić A. Silvana	2	15	Animal Physiology	E
10.	DMB010	Physiology of adaptations of animals to chemical stress	Kaišarević N. Sonja	2	15	Animal Physiology	E
11.	DMB011	Molecular ecotoxicology	Teodorović S. Ivana, Pavić B. Aleksandar	2	15	Environmental Protection	E

12.	DMB012	Chronobiology	Kostić S. Tatjana	2	15	Animal Physiology	E
13.	DMB013	Molecular and cellular bases of cardiovascular diseases	Stanić Bojana	2	15	Biochemistry	E
14.	DMB014	Networks of signaling pathway in reproduction	Kostić S. Tatjana Andrić A. Silvana	2	15	Animal Physiology	E
15.	DMB015	Molecular regulation of the ovarian function	Andrić Lj. Nebojša, Pogrmić- Majkić I. Kristina	2	15	Cell Biology/Animal Physiology	E
16.	DMB016	Molecular mechanisms & signaling pathways in regulation of testicular functions	Andrić A. Silvana, Kostić S. Tatjana,	2	15	Animal Physiology	E
17.	DMB017	Reproductive endocrinology	Kostić S. Tatjana, Andrić A. Silvana	2	15	Animal Physiology	E
18.	DMB018	Genetic populations polymorphism in animal	Đan R. Mihajla, Veličković N. Nevena	2	15	Genetics	E
19.	DMB019	Molecular mechanisms of cellular communication	Andrić A. Silvana, Kostić S. Tatjana	3	15	Animal Physiology	E
20.	DMB020	Biochemical markers of diseases	Kojić K. Danijela, Popović D. Željko	3	15	Biochemistry/Molecular Biology	E
21.	DMB021	Bioinformatics in the study of	Petri T. Edvard,	3	15	Molecular Biology	E

		nucleic acids and proteins	Purać S. Jelena Popović D. Željko				
22.	DMB022	Structural biology of proteins	Petri T. Edvard	3	15	Molecular Biology	E
23.	DMB023	Mechanisms of cellular stress responses	Purać S. Jelena, Vukašinić L. Elvira	3	15	Molecular Biology	E
24.	DMB024	Membrane biology	Čelić S. Anđelka	3	15	Molecular Biology	E
25.	DMB025	Molecular mechanisms of cancerogenesis	Čelić S. Anđelka	3	15	Molecular Biology	E
26.	DNBEM1	Mathematical and statistical methods in biological research	Kostić R. Vladimir	3	15	Mathematics	E
27.	DNBEM2	Research Methodology	Milankov R. Vesna	3	15	Biology	E
28.	DMB-S1	Seminar 1		4	30	Biology/Molecular biology	C
29.	DMB-S2	Seminar 2		5	30	Biology/Molecular biology	C
30.	DMB-R1	Preparation of a scientific paper for publication in a journal from the SCI list		6	10	Biology/Molecular biology	C
31.	DMB-DD	Doctoral dissertation work		6	20	Biology/Molecular biology	C
ECTS total					495		
NSA – Narrow science area, NAA- Narrow art area, T- Subject type (E-elective, C-compulsory....)							