

University of Maribor
Faculty of Natural Sciences and Mathematics

Information on the undergraduate programme
Educational biology

A) General description

QUALIFICATION AWARDED

Undergraduate programme of university studies Educational Biology and ...

Qualification awarded: University degree in Educational Biology and ...

Duration of study: 3 years

ADMISSION REQUIREMENTS

Undergraduate university programme:

- a) a successfully completed Matura examination, or
- b) a successfully completed vocational Matura examination and exam from one of the subjects of the Matura examination; the selected subject can not be one of the subjects passed on the vocational leaving exam; or
- c) a successfully finished secondary school before June 1, 1995.

In case of enrolment limitations, applicants are admitted according to their GPA on the Matura examination (under a), vocational Matura examination (under b) or final examination (under c) (60% of the points) and their overall GPA in the third and the fourth year of secondary school (40% of the points).

EDUCATIONAL AND PROFESSIONAL GOALS

The main educational and professional goal is to educate the students in the following fields: general botany and zoology, human biology, biochemistry with microbiology and genetics, systematic botany and zoology, evolution, physiology of plants and animals, ecology, laboratory, experimental and field work, and fundamentals of psychology of development and learning, didactics and pedagogy. All the fields are in accordance with the current employment needs and the envisioned future needs of educational experts. The graduates of the undergraduate study are skilled in using communicational, informational and computer systems in their work. They can continue their studies on the postgraduate level, especially on the educational study programmes, but can as well be employed for example in government administration, publishing, journalism, educational centres or economy. The graduates are not qualified for teaching profession until they finish an educational study programme also on the second (postgraduate) level.

The main general competences achieved by the graduates:

- Ability of analytical thinking and understanding of different systems, which enables the graduates to integrate themselves into the interdisciplinary groups.
- Graduates master communication and other skills that enable them to integrate into team work in local as well as international educational and scientific environment.
- Graduates are able to employ a holistic view of the educational process and renew the forms of the discipline with inter-subject connections.
- Graduates develop positive attitude towards teaching profession.
- Graduates are aware of professional ethics, and of multicultural issues in the field of education.
- Graduates are qualified for autonomous professional work, self-criticism, initiative and evaluation.

- Graduates are able to plan their own professional development, follow new achievements in their field and integrate them into their work.
- Graduates are sensitive for different social situations and contexts.
- Graduates are able to work with ICT, to follow its development and autonomously evaluate the meaning of different media and discoveries for effective learning process.
- Graduates gain skills of good interpersonal communication together with skills of written and oral expression in mother tongue.
- Graduates are able to study and manage resources in one of the foreign languages.

The main specific competences achieved by the graduates:

- Graduates become familiar with and understand basic biological concepts, procedures and theories; and are able to use their knowledge in different contexts.
- Graduates can present and hand on knowledge of basic biological concepts.
- Graduates get ability to understand and solve fundamental biological problems on qualitative and quantitative level.
- Graduates use accurate biological terminology and appropriate professional diction.
- Graduates can solve biological and other problems with the help of modern informational and communication technology.
- Graduates are familiar with and understand the basics of botany, zoology, microbiology, biochemistry, genetics, ecology and evolution.
- Graduates gain the ability to plan, accomplish and evaluate simpler biological experiments and field samplings.
- Graduates are able to evaluate strategies of teaching in the field of biology.
- Graduates are able to deduce new logical conclusions from given information.
- Graduates develop positive attitude towards biology and recognize it's influence and value in human society.

ACCESS TO FURTHER STUDIES

Graduates of the undergraduate university programme Educational Biology can continue their studies at the second level leading to the second bologna degree (usually towards teaching profession). Graduates of the postgraduate level will be able to continue the studies at a higher level leading to the Doctor degree.

COURSE STRUCTURE DIGRAM WITH CREDITS

Complete curricula of the undergraduate university programme of the Educational Biology are given in the following pages. All the courses (obligatory and elective) are given together with the semester of study, the amount and type of the contact hours and the assigned number of the ECTS credits. The abbreviations in the curriculum have the following meaning:

L – Lectures

S – Seminar

T – Tutorial

LW – Laboratory Work

FW – Field Work

Undergraduate university programme Educational biology and...

1st year, 1st semester

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ECTS
1	Joint Professional Course*	22,5 (45)*	-	15 (30)*	-	-	37,5 (75)*	52,5 (105)*	90/3 (180/6)*
2	Fundamentals of General Botany	30	-	-	30	-	60	120	180/6
3	Fundamentals of Zoology	30			30	-	60	120	180/6
	Cummulative	82,5		15	60		157,5	292,5	450/15

* Students choose one course from the table of Joint Professional Courses. Each study programme contributes one half of the total hours and ECTS (in brackets). The calculation of hours above has been taken for a typical course with 45L and 30T.

1st year, 2nd semester

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ECTS
4	Joint Professional Course*	22,5 (45)*	-	-	15 (30)*	-	37,5 (75)*	52,5 (105)*	90/3 (180/6)*
5	Fundamentals of systematic botany	45	-	-	30	-	75	135	210/7
6	Human Biology	30	-	-	30	-	60	90	150/5
	Cummulative	97,5	-	-	75	-	172,5	277,5	450/15

* Students choose one course from the table of Joint Professional Courses. Each study programme contributes one half of the total hours and ECTS (in brackets). The calculation of hours above has been taken for a typical course with 45L and 30LW.

Joint Professional Courses

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ECTS
1	Mathematics	45	-	30	-	-	75	105	180 / 6
2	Physics	45	-	-	30	-	75	105	180 / 6
3	Chemistry	45	-	-	30	-	75	105	180 / 6

2nd year, 3rd semester

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ ECTS
7	Biochemistry with fundamentals of microbiology and genetics	60			30		90	180	270/9
8	Introduction to laboratory and experimental work	15	15				30	60	90/3
9	Psychology of development and learning*	22,5 (45)*	7,5 (15)*	7,5 (15)*			37,5 (75)*	52,5 (105)*	90/3 (180/6)*
	Cummulative	97,5	22,5	7,5	30		157,5	292,5	450/15

* A joint course, each programme contributes half of the ECTS and total hours.

2nd year, 4th semester

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ ECTS
10	Information and communication technology (ICT)	15 (30)*			15 (30)*		30 (60)*	30 (60)*	60/2 (120/4)*
11	Systematic zoology	45			30		75	135	210/7
12	Evolution	30					30	60	90/3
13	Elective Course**	7,5 (15)*			7,5 (15)*		15 (30)*	75 (150)*	90/3 (180/6)**
	Cummulative	97,5			52,5		150	300	450/15

** Students choose one of the courses from the Table of Elective Courses below or any other elective course from the other study programme. The arrangement of contact hours is provisional.

3rd year, 5th semester

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ ECTS
14	Pedagogy*	15 (30)*	7,5 (15)*				22,5 (45)*	37,5 (75)*	60/2 (120/4)*
15	Introduction to Plant Physiology	30			30		60	60	120/4
16	Fundamentals in ecology	30			15	15	60	120	180/6

17	Elective Course**	7,5 (15)*			7,5 (15)*		15 (30)*	75 (150)*	90/3 (180/6)**
	Cummulative	82,5	7,5		52,5	15	157,5	292,5	15

* A joint course, each programme contributes half of the ECTS and total hours.

** Students choose one of the courses from the Table of Elective Courses bellow or any other elective course from the other study programme. The arrangement of contact hours is provisional.

3rd year, 6th semester

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ECTS
18	Didactics*	15 (30)*	7,5 (15)*				22,5 (45)*	37,5 (75)*	60/2 (120/4)*
19	Fundamentals of Animal Physiology	30			30		60	90	150/5
20	Biology Field Course				15	30	45	105	150/5
	Elective Course**	7,5 (15)*			7,5 (15)*		15 (30)*	75 (150)*	90/3 (180/6)**
	Cummulative	52,5	7,5		52,5	30	142,5	307,5	450/15

* A joint course, each programme contributes half of the ECTS and total hours.

** Students choose one of the courses from the Table of Elective Courses bellow or any other elective course from the other study programme. The arrangement of contact hours is provisional.

Elective Courses

Course number	Course title	L	S	T	LW	FW	Total contact hours	Individual work	Total hours/ECTS
1	Vivaristics	15			15		30	150	180/6
2	Ethology	15			15		30	150	180/6
3	Speleobiology	15				15	30	150	180/6
4	Biology of the Cell	15				15	30	150	180/6
5	Biodiversity	15				15	30	150	180/6
6	Habitat Types and Natura 2000	15				15	30	150	180/6
7	Phytocoenology	15			15		30	150	180/6

FINAL EXAMINATION

There is no final examination.

EXAMINATION AND ASSESMENT REGULATIONS

The examinations are usually written and oral. Some of the courses involve the preparation of a seminar work which is usually defended by an oral presentation. The oral examination is usually preconditioned by laboratory attendance, the successful completion of the written exam and the seminar work where required.

Timetables of examinations are issued yearly by the Faculty senate at the beginning of the academic year and are published on the faculty web page and on the notice boards. There are at least 5 examinations for each course per academic year and students are free to choose the date of examination. The students need to register for examination 7 days before the examination date. The examination can be cancelled no later than 3 days before the examination date. The use of calculators, literature and other items during the examination is determined by the lecturer and may vary from course to course.

ECTS DEPARTMENTAL CO-ORDINATOR

ECTS departmental co-ordinator is the actual head of the department.

Information on the degree programme
Educational Biology
(Izobraževalna biologija)

B) List of Subjects

Undergraduate university programme Educational biology and...

Code	Course title	Type	ECTS
	Biochemistry with Fundamentals of Microbiology and Genetics	O	9
	Biology Field Course	O	5
	Biology of the Cell	E	6
	Chemistry	O	6
	Biodiversity	E	6
	Didactics	O	4
	Ethology	E	6
	Evolution	O	3
	Fundamentals of Animal Physiology	O	5
	Fundamentals in Ecology	O	6
	Fundamentals of General Botany	O	6
	Fundamentals of Systematic Botany	O	7
	Fundamentals of Zoology	O	6
	Habitat Types and Natura 2000	E	6
	Human Biology	O	5
	Information and Communication Technology (ICT)	O	4
	Introduction to Laboratory and Experimental Work	O	3
	Introduction to Plant Physiology	O	4
	Mathematics	O	6
	Pedagogy	O	4
	Physics	O	6
	Psychology of Development and Learning	O	6
	Phytocoenology	E	6
	Speleobiology	E	6
	Systematic Zoology	O	7
	Vivistics	E	6

O ... obligatory course E ... elective course