

## FACULTY OF NATURAL SCIENCES MBU

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In the Decree no. 3/213/2016 the Bureau of the Dean of the Faculty of Natural Science, Matej Bel University approved the extension of the deadline for submitting applications in all levels of university study programmes to 29 April 2016.

**Application deadline:** until 29/ 04/ 2016 (D, E)

### Date of the written admission examination:

8/ - 10/ 06/ 2016 Bachelor's and Master's Degree Studies (internal and external studies)

10/ 06/ 2016 PhD. studies (internal and external studies)

**FNS open day:** 11/ 2015 – during Science Week

### Admission Examination Fee

For application to one study programme (written form) is **35 €**

For application to one study programme via electronic form is **32 €**

**Payments are only accepted by wire transfer to the following:**

**Bank:** Štátna pokladnica

**Account:** 7000095590/8180 **IBAN:** SK75 8180 0000 0070 0009 5590

**Variable symbol:** Bachelor's Degree Studies - 5031; Master's Degree Studies - 5032;  
Doctoral Studies - 5033

**Constant symbol:** 0308

**Specific symbol:** applicants from the Slovak Republic – birth certificate number  
foreign applicants – date of birth in the following form: DDMMYY

**Message for recipient:** name and surname of the candidate

## Accredited Study Programmes Offered by the Faculty of Natural Sciences MBU in the Academic Year 2016/2017

Faculty	Study Programme	Form of Study	Degree of Study	Period of Study	Place of Study	Total admitted
<b>BACHELOR'S DEGREE STUDIES</b>						
<b>Main Branch of Study: Chemistry, Secondary Branch of Study: Environmental Management</b>						
FNS	Environmental Chemistry	Internal	BA	3yrs	Banská Bystrica	15
<b>Branch of Study: Chemistry</b>						
FNS	Forensic and Criminal Chemistry	Internal	BA	3yrs	Banská Bystrica	30
<b>Branch of Study: Geology</b>						
FNS	Applied Geology	Internal	BA	3yrs	Banská Bystrica	15
<b>Branch of Study: Geography</b>						
FNS	Geography	Internal	BA	3yrs	Banská Bystrica	50
<b>Branch of Study: Environmental Management</b>						
FNS	Environmental Science	Internal	BA	3yrs	Banská Bystrica	25

<b>Branch of Study: Synecology</b>							
FNS	Ecology and protection of Ecosystems		Internal	BA	3yrs	Banská Bystrica	15
<b>Branch of Study: Mathematics</b>							
FNS	Mathematics		Internal	BA	3yrs	Banská Bystrica	15
<b>BACHELOR'S DEGREE STUDIES continued</b>							
<b>Branch of Study: Applied Computer Science</b>							
FNS	Applied Computer Science		Internal	BA	3yrs	Banská Bystrica	50
<b>Branch of Study: Teacher training in academic subjects</b>							
Dual specialties (Approbation)							
FNS	Teaching of Biology	Teaching of Physics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Biology	Teaching of Geography	Internal	BA	3yrs	Banská Bystrica	15
FNS	Teaching of Biology	Teaching of Chemistry	Internal	BA	3yrs	Banská Bystrica	15
FNS	Teaching of Biology	Teaching of Mathematics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Biology	Teaching of English Language and Literature (*)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Biology	Teaching of History (*)	Internal	BA	3yrs	Banská Bystrica	10
FNS	Teaching of Physics	Teaching of Mathematics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Physics	Teaching of Geography	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Physics	Teaching of English language and Literature (*)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Physics	Teaching of Ethics (**)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Geography	Teaching of Mathematics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Geography	Teaching of History (*)	Internal	BA	3yrs	Banská Bystrica	15
FNS	Teaching of Geography	Teaching of English Language and Literature (*)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Geography	Teaching of German Language and Literature (*)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Teaching of Physics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Teaching of Geography	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Teaching of Mathematics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Teaching of English Language and Literature (*)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Teaching of Biology	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Teaching of Physics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Teaching of Chemistry	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Teaching of Geography	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Teaching of Mathematics	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Teaching of English Language and Literature (*)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Teaching of History	Internal	BA	3yrs	Banská Bystrica	10

<b>BACHELOR'S DEGREE STUDIES continued</b>							
Pedagogy cont'd: Dual specialties (Approbation)							
FNS	Teaching of Mathematics	Teaching of English Language and Literature (*)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of Slovak Language and Literature	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of Ethics (**)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of Fine Arts (**)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of Music (**)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of Psychology (**)	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of Pedagogy (**)	Internal	BA	3yrs	Banská Bystrica	5
<b>Interdisciplinary Studies of the Branch of Study of Pedagogy with the Branch of Study of Pedagogy for Professional Subjects and Practical Preparation</b>							
FNS	Teaching of Biology	Technology	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Physics	Technology	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Technology	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Computer Science	Technology	Internal	BA	3yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Technology	Internal	BA	3yrs	Banská Bystrica	5
<b>Branch of Study: Pedagogy of Professional Subjects and Practical Preparation</b>							
FNS	Teaching of Practical Preparation		Internal	BA	3yrs	Banská Bystrica	30
<b>BA Daily Studies in Total</b>							<b>470</b>
<b>Main Branch of Study: Chemistry, Secondary Branch of Study: Environmental Management</b>							
FNS	Environmental Chemistry		External	BA	4yrs	Banská Bystrica	10
<b>Branch of Study: Chemistry</b>							
FNS	Forensic and Criminal Chemistry		External	BA	4yrs	Banská Bystrica	20
<b>Branch of Study: Geography</b>							
FNS	Geography		External	BA	4yrs	Banská Bystrica	20
<b>Branch of Study: Environmental Management</b>							
FNS	Environmental Science		External	BA	4yrs	Banská Bystrica	15
<b>Branch of Study: Applied Computer Science</b>							
FNS	Applied Computer Science		External	BA	4yrs	Banská Bystrica	25
<b>Branch of Study: Pedagogy of Professional Subjects and Practical Preparation:</b>							
FNS	Teaching of Practical Preparation		External	BA	4yrs	Banská Bystrica	30
<b>BA External Studies in Total</b>							<b>120</b>
<b>MASTER'S DEGREE STUDIES</b>							
<b>Branch of Study: Geology</b>							
PNS	Applied Geology		Internal	MA	2yrs	Banská Bystrica	15
<b>Branch of Study: Geography</b>							
FNS	Geography and Regional Development		Internal	MA	2yrs	Banská Bystrica	20
<b>Branch of Study: Environmental Management</b>							
FNS	Environmental Management		Internal	MA	2yrs	Banská Bystrica	25
<b>Branch of Study: Synecology</b>							

FNS	Ecology and Protection of Ecosystems		Internal	MA	2yrs	Banská Bystrica	15
<b>Branch of Study: Mathematics</b>							
FNS	Actuarial, Financial and Statistical Mathematics		Internal	MA	2yrs	Banská Bystrica	15
<b>Branch of Study: Applied Computer Science</b>							
FNS	Applied Computer Science		Internal	MA	2yrs	Banská Bystrica	30
<b>Branch of Study: Pedagogy</b>							
Dual specialties (Approbation)							
FNS	Teaching of Biology	Teaching of Geography	Internal	MA	2yrs	Banská Bystrica	10
FNS	Teaching of Biology	Teaching of Physics	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Biology	Teaching of Chemistry	Internal	MA	2yrs	Banská Bystrica	15
FNS	Teaching of Biology	Teaching of Mathematics	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Biology	Teaching of English Language and Literature (*)	Internal	MA	2yrs	Banská Bystrica	10
FNS	Teaching of Biology	Teaching of French Language and Literature (*)	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Biology	Teaching of History(*)	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Physics	Teaching of Mathematics	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Physics	Teaching of Geography	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Geography	Teaching of Mathematics	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Geography	Teaching of History (*)	Internal	MA	2yrs	Banská Bystrica	15
FNS	Teaching of Geography	Teaching of English language and Literature (*)	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Geography	Teaching of German Language and Literature (**)	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Teaching of Geography	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Teaching of Mathematics	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Chemistry	Teaching of Physics	Internal	MA	2yrs	Banská Bystrica	5
<b>MASTER'S DEGREE STUDIES continued</b>							
Pedagogy Cont'd - Dual specialties (Approbation)							
FNS	Teaching of Chemistry	Teaching of Slovak language and Literature (*)	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of English language and Literature (*)	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of German language and Literature (*)	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Teaching of Slovak language and Literature (*)	Internal	MA	2yrs	Banská Bystrica	5
<b>Interdisciplinary Studies of the Branch of Study of Pedagogy with the Branch of Study of Pedagogy for Professional Subjects and Practical Preparation:</b>							
FNS	Teaching of Physics	Technology	Internal	MA	2yrs	Banská Bystrica	5
FNS	Teaching of Mathematics	Technology	Internal	MA	2yrs	Banská Bystrica	5
<b>MA Daily Studies in Total</b>							<b>255</b>
<b>Branch of Study: Geology:</b>							

FNS	Applied Geology	External	MA	3yrs	Banská Bystrica	10
<b>Branch of Study Geography:</b>						
FNS	Geography and Regional Development	External	MA	3 yrs	Banská Bystrica	15
<b>Branch of Study: Environmental Management</b>						
FNS	Environmental Management	External	MA	3 yrs	Banská Bystrica	10
<b>Branch of Study: Applied Computer Science:</b>						
FNS	Applied Computer Science	External	MA	3 yrs	Banská Bystrica	30
<b>MA Daily studies in Total</b>						<b>65</b>
<b>BA and MA in Total</b>						<b>910</b>
<b>Notes:</b> <i>In case of a lesser number of applicants for a specific study programme in external form, the faculty reserves the right not to open the programme.</i>						
(*) Interfaculty Studies in cooperation with the Faculty of Arts MBU						
(**) Interfaculty Studies in cooperation with the Faculty of Education MBU						

## DOCTORAL STUDIES

Study Programme	Form of Study	Degree of Study	Years of study
<b>Branch of Study Subject Didactics</b>			
<i>Didactics of geography</i>	I / E	PhD.	3 / 4 yrs.
<b>Branch of Study Synecology</b>			
<i>Evolution of Ecosystems and their Protection</i>	I / E	PhD.	4 / 5 yrs.
<b>Branch of Study Geochemistry</b>			
<i>Geochemistry</i>	I / E	PhD.	4 / 5 yrs.
<b>Branch of Study Environmental management</b>			
<i>Remediation of Environmental Burdens</i>	I / E	PhD.	3 / 4 yrs.
<b>Branch of Study Mathematical Analysis</b>			
<i>Mathematical Analysis (SP in both Slovak and English Language)</i>	I / E	PhD.	4 / 5 yrs.
<b>Branch of Study Theory of Mathematics Education</b>			
<i>Theory of Mathematics Education</i>	I / E	PhD.	3 / 4 yrs.
<b>Branch of Study Theory of Physics Education</b>			
<i>Theory of Physics Education</i>	I / E	PhD.	3 / 4 yrs.
<b>Branch of Study Probability and Mathematical Statistics</b>			
<i>Probability and Mathematical Statistics (SP in both Slovak and English Language)</i>	I / E	PhD.	4 / 5 yrs.

Notes:

I internal form of studies  
E external form of studies

PhD.

Academic title doctor philosophiae

## GENERAL INFORMATION ABOUT THE ADMISSION PROCEDURE

The application is due on **31/03/2016** for both Bachelor's and Master's degree studies in internal and external form. Postmarked date will be taken into consideration. The applicant may apply for more than one study programme but the applicant may only include one study programme in each application. It is necessary to always attach a copy of proof of payment of

the admission fee to the application form. Without the former, the application form will not be accepted and will be returned.

Admission examination fee is **€35** for one study programme of University studies in internal and external form (**€32** for the electronic application forms).

If the applicant applies for two and more study programmes offered by the FNS MBU, the applicant should pay **€35 fee for each study programme (€32 for each study programme** for the electronic application form).

Refunds will not be granted for applicants that do not succeed or did not take part in the admission examination.

In case of the applicant's absence from the admission examination due to a serious reason, part of the fee will be refunded once a written request is delivered to the student administration office of the faculty. The request must be postmarked before the date of admission examination.

The theses for the admission examination including the extent of required knowledge will be sent by the student administration office of the faculty along with the invitation to the admission examination.

Applicants that are accepted without an admission examination will be sent an admission decision after the student admission office has received both a secondary school diploma and the final-year school report (for MA's degree studies, a BA diploma; for PhD's degree studies, a MA or Ing. diploma). This is in accordance to § 58 of the law. 131/2002 Coll. Students who pass the admission examination will be sent the decision regarding their admission to studies according to § 58 of the law 131/2002 Coll.

## **CONDITIONS FOR ADMISSION**

According to § 58 of the law 131/2002 Coll., the admission procedure commences once the applicant for University studies sends the application form for studies at the Faculty of Natural Sciences at MBU.

According to § 58, Section 3 b/ of the law 131/2002 Coll. all external applicants employed as volunteers, civil servants, or are in the service of agencies of special forces are required to enclose with their application a certificate of continuous employment at the time of the application. In case of a lesser number of applicants for a specific study programme in external form, the faculty reserves the right not to open the programme.

The faculty does not require a medical certificate for university studies except for the study programmes requiring practical skills within experimental teaching (i.e. teaching of Chemistry, Physics, Biology, Technical Education, Practical Preparation, Environmental Chemistry, and Applied Geology).

Foreign students must meet the aforementioned criteria, too. Foreign students who are not capable of speaking Slovak fluently are obliged to take part in a one-month language course provided by the Methodological centre MBU for Slovaks living abroad.

Recognition of the education certificate obtained from secondary schools abroad is the responsibility of the regional school authority which issues the decision after a review of the details ensuring that all conditions have been met. Equivalence of certificates obtained in secondary schools abroad is regulated by the Act. 569/2003 Coll. Recognition of education certificates from Austria or Germany is not necessary. Recognising the education in secondary schools abroad from a non-EU country is also the responsibility of the regional school authority. Equivalence of Diplomas obtained in secondary schools abroad is regulated by the Decree no. 207/1993 Coll.

## Admission Examination

### BACHELOR'S DEGREE STUDY

In the academic year 2016/2017 the admission examination for the **Bachelor's degree programmes** in both internal and external form will be held as follows:

1. According to the guarantor of the study programme's decision, applicants can be admitted to studies with no admission examination if the number of applicants does not exceed the admission plan. The basic condition for admission will be a completed secondary education with a secondary school leaving examination.
2. If the number of applicants does not considerably exceed the admission plan, applicants will be admitted to studies with no admission examination according to the following criteria:
  - evaluation with a mark of 'excellent' (A) obtained in the secondary grammar school leaving examination: in specialisation of subjects for Teaching programmes, in a profile subject for non-Teaching programmes,
  - evaluation no worse than 'very good' (B) is obtained in considered certificates at secondary grammar schools,
  - successful researcher of the regional or state round of Olympiads, participation in Secondary school students' conference or in state rounds of contests in the respective specialisations.
3. If the number of applicants exceeds the admission plan for the study programme, applicants will be admitted to studies in two rounds. In the first round, applicants can be admitted with no admission examination according to the aforementioned criterion No. 2 based on the decision of the guarantor of study programme. In the second round, applicants will be admitted to studies according to admission test results. In order for the applicant to successfully pass the test, the applicant must have an assessment of at least 50% from the test result (in case of a Teaching Study Programmes with a combination, the two specialisation tests must have an assessed of at least 50%).

Written tests will be given for:

- mathematics, encompassing the secondary grammar school curriculum for the study programmes **Mathematics, Teaching of Mathematics,**
- physics, encompassing the secondary grammar school curriculum for the study programme **Teaching of Physics,**
- general knowledge concerning the application of mathematics and physics for the study programme **Teaching of Technology,**
- biology, encompassing the secondary grammar school curriculum for the study programme **Teaching of Biology,**
- biology and ecology, encompassing the secondary grammar school curriculum for the study programme **Environmental Science,**
- biology and ecology, encompassing the secondary grammar school curriculum for the study programme **Ecology and protection of Ecosystems,**
- chemistry, encompassing the secondary grammar school curriculum for the study programme **Teaching of Chemistry, Environmental Chemistry, Forensic and Criminal Chemistry,**

- geography and chemistry, encompassing the secondary grammar school curriculum for the study programme **Applied Geology**,
- geography, encompassing secondary the grammar school curriculum for the study programme **Teaching of Geography, Geography**,
- mathematics and computer science, encompassing the secondary grammar school curriculum for the study programme **Teaching of Computer Science, Applied Computer Science**,
- pedagogy, encompassing the general knowledge of a secondary pedagogical school graduate, and technical application of mathematics and physics for the study programme **Teaching of Practical Preparation**.

Written tests and conditions for admission to teaching study programmes in combination, with one specialisation being provided by the Faculty of Education MBU:

- **Teaching of Ethics** – completed secondary education with secondary school leaving examination of A and B category, passing the admission examination in the form of a test which should prove applicants' general knowledge encompassing the secondary school curriculum concerning civics education: rudiments of Ethics, Political Science, and the History of Philosophy. Applicants should prove their general knowledge regarding topical issues of social and cultural life in the Slovak Republic as well as abroad. Graduates from secondary grammar schools whose average grades obtained in the final certificate in a foreign language, civics, and Slovak language and literature is not higher than 2.00 (with a higher number indicating a lower quality score), will be accepted with no admission examination.
- **Teaching of Fine Arts** – study programme is intended for graduated from secondary grammar schools with school leaving examination and secondary vocational schools with school leaving examination. The basic condition for admission is a talent test that should prove the applicant's creativity and sense of art.
- **Teaching of Music** – a Bachelor's degree study programme in the branch of study 1.1.3 Teaching of Artistic-Educational and Educational Subjects. The applicant will perform a talent test: play a musical instrument and can sing at a level of a student from the second level of a Specialty School of Art (as for the solo singers, they should master a musical instrument at a level of a student of the fifth level in a Specialty School of Art), is familiar with musical theory at a level of a graduate of a Specialty School of Art, possesses a good singing voice, appropriate music skills, and is passionate about the profession.
- **Teaching of Psychology** – basic condition for admission to the bachelor's degree studies is a completed secondary education or secondary vocational education. Applicants are to prove their knowledge in psychology and biology encompassing the secondary school curriculum. Admission is realised according to test results and Conditions of admission procedure.
- **Teaching of Pedagogy** – basic conditions for admission to the bachelor's degree studies is a completed secondary education with school leaving examination and passing admission examination. The theses of admission examination are set down by the Department of Pedagogy along with the guarantor of the study programme. Conditions for the admission procedure, as well as requirements and criteria are approved by the bodies of the Faculty and University and are updated annually. As for the admission examination, the applicant should prove: his preconditions and skills necessary for the University studies and assessed quality of knowledge in pedagogy and psychology encompassing the secondary school curriculum. Presentation of a



pedagogy publication according to the applicant's choice. As far as a teaching study programme in combination is concerned, the applicant must pass the other admission examination, too.

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Written tests and conditions for admission to teaching study programmes in combination, with one specialisation being provided by the Faculty of Arts MBU:

**Teaching of English Language and Literature** – written form of admission examination is focused on the knowledge of grammar, vocabulary, and practical communication skills (part of which will be evaluated in the traditional way):

To be assigned the maximum score from the English language in the admission procedure (without participating in the admission examination), the applicant must present the certificate obtained by completing at least one of the following examinations:

- IELTS – International English Language Testing System – minimum level 6,5,
- University of Cambridge ESOL Examinations, Certificate in Advanced English,
- University of Cambridge ESOL Examinations, Certificate of Proficiency in English,
- University of Cambridge ESOL Examinations, First Certificate in English – evaluation A,
- secondary school leaving examination (GCSE) from the English language – level B2, external part minimum of 85% + oral part - evaluation "excellent (A)",
- applicants that successfully completed the exam from the English language as a part of National Comparative Exams (NCE). The applicant has completed the NCE successfully in case he obtained a minimum percentile of 85. The applicant does not have to document the results of the NCE. However, the applicant needs to include the consent to make the NCE results available to the faculty at [www.scio.cz/nsz](http://www.scio.cz/nsz) in their application form.

**Teaching of History** – no admission examination

If the number of applicants exceeds the admission plan for the study programme, the faculty reserves the right to select applicants according to the average of grades obtained in the secondary school leaving examination (GCSE).

**Teaching of the French Language and Literature** – no admission examination.

Foreign language competence at a minimum of a **B2 level** according to the Common European Framework of Reference for Languages is the precondition for studying the French language and literature in all combinations of branch of study - Teaching of Academic Subjects.

If the number of applicants exceeds the admission plan for the study programme, the faculty reserves the right to select applicants according to the average of grades obtained in the secondary school leaving examination (GCSE). To be assigned the maximum score in the admission procedure, the applicant must present the certificate (certified copy) obtained by completing at least one of the following examinations:

- secondary school leaving examination (GCSE) from the French language – B2 level with the evaluation 'excellent (A)',
- in case of graduates from a bilingual sections (the French language) – result of oral and written part of secondary school leaving examination (GCSE) with the evaluation 'excellent (A)',
- French language diploma DELF (B2 level),
- French language diploma DALF (C1 level and higher),

- 1st – 3rd place at the French Language Olympiad (either in regional or national round),
- state examination in the French language issued by the State Language School.

### **Teaching of German Language and Literature – no admission examination**

Foreign language competence at a minimum of a **B2 level** according to the Common European Framework of Reference for Languages is the precondition for studying the German language and literature in all combinations of branch of study - Teaching of Academic Subjects.

If the number of applicants exceeds the admission plan for the study programme, the faculty reserves the right to select applicants according to the average of grades obtained in the secondary school leaving examination (GCSE).

### **Teaching of the Slovak Language and Literature – no admission examination**

If the number of applicants exceeds the admission plan for the study programme, the faculty reserves the right to select applicants according to the average of grades obtained in the secondary school leaving examination (GCSE).

## **MASTER'S DEGREE STUDY**

The applicant for study in a **Master's degree** study programme in the academic year 2016/2017 must have completed a bachelor's degree of studies in the same or similar study programme which is being applied for. **Study applicants who have completed a bachelor's degree of studies abroad are required under § 106 of Act no. 131/2002 Coll. to present a recognition of a qualification or Diploma obtained outside the territory of the Slovak Republic. The applicant admitted to studies is obliged to present the recognition of documents no later than the date of enrolment.**

In the academic year 2016/2017 the admission examination for **Master's degree** programmes in both internal and external form will be held as follows:

1. According to the guarantor of the study programme's decision, applicants can be admitted to studies with no admission examination if the number of applicants does not exceed the admission plan. Basic condition for admission will be a completed bachelor's degree of studies in the same or similar study programme.
2. If the number of applicant does not considerably exceed the admission plan, applicants will be admitted to studies with no admission examination according to the guarantor of the study programme's decision.
3. If the number of applicants exceeds the admission plan for the study programme, applicants will be admitted to studies in two rounds. In the first round, applicants will be admitted with no admission examination. In the second round, applicants will be admitted to studies according to admission test results. In order for the applicant to successfully pass the test, the applicant must have an assessment of at least 50% from the test result (in case of a Teaching Study Programmes with a combination, the two specialisation tests must have an assessed of at least 50%). Tests will be written in:
  - a pedagogical-psychological basis and subject specialisations of the study programme encompassing the bachelor's degree study curriculum for study programmes **Teaching**

**of Biology, Physics, Chemistry, Mathematics, along with subject specialisations provided by the Faculty of Education or Faculty of Arts MBU,**

- a pedagogical-psychological basis and general knowledge concerning application of mathematics and physics encompassing the bachelor's degree study curriculum for the study programme **Pedagogy of Technical Education,**
- a natural scientific basis of the study programme Environmental management and from rudiments of environmental management encompassing the bachelor's degree studies curriculum for the study programme **Environmental Management,**
- applied computer science encompassing the bachelor's degree studies curriculum for the study programme **Applied Computer Science,**
- applied geology encompassing the bachelor's degree studies curriculum for the study programme **Applied Geology,**
- mathematics encompassing the bachelor's degree studies curriculum for the study programmes **Actuarial, Financial and Statistical Mathematics,**
- ecology, monitoring and computer systems encompassing the bachelor's degree studies curriculum for the study programmes **Ecology and Protection of Ecosystems,**
- complex physical and human geography, physical-geographical syntheses, human-geographical syntheses, protection of nature and landscape, regional geography of Slovakia, continents and oceans encompassing the bachelor's degree studies curriculum for the study programme **Geography and Regional Development.**

Evaluation of a written admission tests to bachelor's and master's study programmes is carried out electronically. Results of the entrance examination will be published on a notice board on the Faculty's premises approximately an hour later, and posted on the faculty's website on the next day. The applicant has the right to ask about the evaluation of the written test and ask a committee of the Faculty of Natural Sciences for an explanation.

More detailed information on individual study programmes and admission examination can be found on the website of the Faculty of Natural Sciences MBU and on the websites of individual departments.

Information concerning the admission procedure for doctoral studies at the Faculty of Natural Sciences is currently published on the website of the faculty in accordance with the current Directive on doctoral studies at the Faculty of Natural Sciences MBU.

## **ACCOMODATION, BOARDING AND HEALTH CARE**

*Accommodations are to be found in the residence hall ŠD 1:*

- address: Tajovského 40, 974 01 Banská Bystrica, director of the residence hall: Dienešová Darina, telephone: 048/4467619, e-mail: [darina.dienesova@umb.sk](mailto:darina.dienesova@umb.sk), information desk of the residence hall - telephone: 4467620,
- bus connection: bus n. 34, 35, 36 to Podlavice and/or Skubín, trolleybus n. 1 to the Roosevelt Hospital (bus stop *Tajovského SOU* and a five-minute walk),
- type of accommodation: triple and double rooms with shared bath and lavatory. Furnishings: bed, bed-side table, wardrobe, shelves, chair, writing desk, blanket, pillow, bed cover, and bedding. On each floor, there is a common kitchen (cooker, cupboards)
- common rooms: study rooms, V club – managed by University students.

Boarding: In the building of the residence hall ŠD 1 there is a canteen for both students and employees of MBU.

Health Care: in the premises of the residence hall ŠD 1 there is a GP and a dental office.

All requests and information regarding accommodation will be sent to applicants along with a decision on admission and other information.

## **THE APPLICATION OF GRADUATES**

### **Bachelor's Degree Study**

#### **Study Programme (hereinafter referred to as SP) of the branches of study Pedagogy of Academic Subjects and Pedagogy of Professional Subjects and Practical Preparation**

Graduates can work as a teaching assistant in both lower and higher secondary education but in the first place, they are ready to successfully continue with a master's degree studies of the same or similar study programme.

#### **SP – Teaching of Practical Preparation**

A graduate is qualified for teaching professional subjects that are mainly focused on acquiring practical skills, habits and craft in a given professional field of education and study. The graduate is prepared to organize, plan and teach practical training with professional knowledge at a Secondary Vocational School within Vocational Training or Practice.

#### **SP – Applied Computer Science**

A graduate is able to analyse, design, create and maintain software information technology systems creatively and independently. There is an emphasis in this study programme placed on acquiring knowledge in the field of software systems enabling the graduate to apply information technology software applications in industry, economy, health care and other areas. The graduate will acquire experience by applying methods of analysis and synthesis of the software systems, through experimental design on the basis of analysing the data obtained, etc. The graduate can carry out scientific work across a whole range of information technology software applications by employing design and programming advanced methods and techniques. The graduate will not only be able to put his knowledge into practice after their studies, but also successfully continue their Master studies in Applied Informatics.

#### **SP – Environmental Science**

A graduate has sufficient theoretical and practical knowledge of environmental management systems, Slovak and EU environmental law and legislation. The graduate gains a fundamental knowledge of issues concerning environmental protection in an economic context. They become an environmental manager with a strong knowledgeable basis of natural sciences, commanding basic principles on technical solutions, pedagogical psychology tools to shape public opinion and guide society towards a sustainable way of life. The graduate can work as an environmental instructor, coordinator or adviser on public relations in protected areas, state administration, local authorities, in the third sector and eco-centres.

#### **SP – Environmental Chemistry**

A graduate has sufficient theoretical and practical skills not only in a given chemistry discipline, but also Physics, Mathematics, Biology, Geology, Geochemistry and Paedology. The graduate can find opportunities to work in central government authorities, the environment, industrial companies, sewage treatment plants, research organizations and departments focused on hygiene-epidemiology and the environment, as well as in

biochemical, pharmaceutical and clinical laboratories as a skilled labourer, able to conduct laboratory analyses on their own.

### **SP – Forensic and Criminal Chemistry**

The graduate has adequate theoretical and practical knowledge in selected chemical disciplines (general, inorganic, analytical, physical, organic, nuclear chemistry, chemistry of toxic substances, and biochemistry) but also has knowledge in physics, mathematics, human anatomy, genetics, forensic science and criminology, which he may apply in the practice. He is able to work independently especially in the field of chemical analysis and can carry out basic tasks in the field of criminology, civil protection, fire and rescue service and the armed forces.

### **SP – Applied Geology**

A graduate acquires the basic vocational knowledge of General Geology, General and Systematic Mineralogy, General and Systematic Palaeontology, Historical and Stratigraphic Geology, Structural Geology, the Petrography of the Igneous and Sedimentary Rocks, Sedimentology, Geochemistry and Mineral Deposits, Hydrogeology and Environmental Geology. The graduate of the study programme is an expert, apart from geology, in a wide spectrum of subject-related fields of study. The graduate will be able to independently handle literature and perform basic assessment activity in the field of geology, or abiotic components of the environment. Graduates of a Bachelor's study may also work in digitization and graphical evaluation of geological data in the institutions of government, municipalities, museums, established companies in the environmental state and private sector. The graduate will be prepared to continue the follow-up master study of geology and related fields.

### **SP – Geography**

A graduate is able to consider the issues and possibilities of the country sphere on different hierarchical levels. The graduate becomes an expert in land management. Studying this programme, they have many possibilities to work in various sectors of the economy, state administration, private sector, etc. There is a high likelihood of getting a job in the management of national parks, protected areas and local government.

### **SP – Mathematics**

A graduate acquires the basic theoretical knowledge of Mathematics enabling them to supplement education with self-studies, if necessary. The graduate understands fundamental mathematical and statistical methods and the way they are applied in practice. The graduate is also able to apply the knowledge of Statistics to solve individual tasks for the collection and analysis of data in basic statistical models. The graduate becomes familiarized using computer technology and with software functions used in statistically-oriented departments or in the financial and insurance sectors. The graduate is prepared to continue their Master studies in Mathematics or other subject-related fields of study, as well as working in various industrial sectors, state administration and the private sector.

### **SP – Ecology and Environmental Protection**

A graduate acquires the fundamental knowledge of the Slovak biota, structure and behaviour of organisational units such as population or country, including the abiotic variables of the environment. Moreover, they become familiar with the ecological requirements for a specific group of organisms and their bioindication potential. The graduate becomes skilled in general and in particular, nature protection at the theoretical and practical

level, as well as in nature and country protection legislation, including its support through institutions.

### **Master's Degree Study**

#### **SP of the department of Pedagogy of Academic Subjects and Teaching of Professional Subjects and practical preparation**

Graduates possess the ability to teach the respective specialisation at lower and higher levels of secondary education as well as University education. In addition to this ability, they are able to manage the development of one of many methodical materials necessary for teaching the respective subject. They will possess competency in methods regarding research and development within subject didactics and are ready to continue their education in Doctoral studies.

A graduate in the Teaching of Technology is competent to teach subject Technology at the lower-secondary education level. It allows the graduate to become skilled in the field of Wood Technology, Mechanical Engineering, Electrical Engineering, Electronics, Cybernetics and the Didactics of Technics.

#### **SP – Applied Geology**

The graduates possess knowledge in theoretical and practical foundations of geology, and understand ongoing processes in the lithosphere, are familiar with the basic methods in applied geological fields, and have mastery of the basics of a broad spectrum of related disciplines (GIS, pedology, anthropogenic load, ecology, geography, etc.). They will have both theoretical and practical knowledge of the latest research methods related to rocks and minerals, allowing them plenty of career opportunities in the labour market. The master's degree graduate can also work on the digitisation and graphical evaluation of geological data within the institutions of state administration, municipalities, museums, as well as environmentally established companies in the state and private sector.

#### **SP – Environmental Management**

The graduate has a basic knowledge of a progressive management system, decision making, the coordination and supervision of resources, processes and relationships of organizations focused on solving environmental challenges. The graduate is familiarized on using the systems of environmental management and environmental auditing in productive and non-productive organizations. They draw up and employ education and training programmes to deal with the negative impacts of society on the environment. They are able to coordinate the activities of stakeholders to address environmental problems both at the regional and local level.

#### **SP – Applied Computer Science**

Graduates are able to analyse; design, implement and maintain software systems and information technology and to conduct research in the respective field with a high level of creativity and independence. The emphasis is put on the acquisition of a deep knowledge of software systems, allowing them to use the application of computer science in industry, economy, education, health care and other industries. In order for the graduate to use a rigorous scientific approach, they will gain experience in the application of the methods of analysis and synthesis of software systems, formulating and testing hypotheses, experimental design based on analysis of data, etc. The graduate can work as a scientific researcher encompassing software applications of information technologies, where they can apply advanced methods and techniques in design and programming.

### **SP – Actuarial Science, Financial Mathematics and Mathematical Statistics**

The graduate is qualified for applying modern methods of Financial Mathematics, Statistics, Econometrics, Numerical Mathematics, etc., in practice. Each graduate has a knowledge of fundamental mathematical and statistical methods and the way they can be applied in practice. They acquire the abilities to employ computer technology (with a particular emphasis on System R) and know all the ways in which they can apply the software used in statistically-oriented departments, as well as in the financial and insurance sector. The graduate can find employment in the financial and insurance sector as an actuary or financial analyst, as well as in various economic sectors as a statistician and data analyst.

### **SP – Ecology and Environmental Protection**

The graduate is able to deal with difficult tasks included in ecological research on their own both in basic and applied form. They supplement the theoretical knowledge of Ecology with a practical knowledge of research methods aimed at plant communities and animal populations. The graduate is able to apply modern research methods to evaluate their state and forecast their further development. Moreover, they are prepared to synthesize the results achieved in the form of models, using methodology based on geographical information systems. The graduate becomes an expert, who is not only able to understand in practice the fundamental function of ecological data, but also process them on their own in databases and graphical outputs. In practice, at least two workers are usually necessary to handle this activity.

### **SP – Geography and Regional Development**

Graduates will gain knowledge and skills regarding the recognition of regions of different hierarchical levels. Their knowledge base is the basic concept of region, or micro-region. They have the ability to use this knowledge and skills in the area of regions of higher hierarchical orders (NUTS 3, NUTS 2, and NUTS 1). They can creatively use identified geographic phenomena and processes to determine the direction that their development should be aimed at. The graduates are able to independently and creatively explore the particularities of each region, as well as to generalise the results of their own research. They will acquire the concept of teamwork and will be able to coordinate research groups focused on research of regions, natural sciences, and humanities being at intersection. Graduates are fully prepared to identify, evaluate and prioritize the potential of regions from all aspects, with emphasis on socio-economic conditions with regard to natural and environmental character of regions. Career opportunities in the labour market can vary: state and public administration, through institutions involved in regional development and planning, as well as institutions related to economic, demographic, and environmental issues. Foreign institutions might be another possibility, e.g. within the EU or even beyond.

## **UNIVERSITY STUDIES AT THE FACULTY OF NATURAL SCIENCES MBU, ORGANISATION AND COURSE OF STUDIES**

University studies are based on the ECTS credit system, a tool that helps to evaluate and manage the studies. University education is realised within accredited study programmes in a bachelor's (three-year) and master's (two-year) degree, and doctoral studies (a three-, four- or five-year degree). Study programmes are realised in internal or external form by in-class or distant methods of learning.

The Faculty of Natural Science MBU presents itself as an educational institution whose aim is to educate future teacher of academic subjects and professional subject and practical preparation as well as experts in the non-educational area. The Faculty is a leading institution in Central Slovakia thanks to its varied and professional specialisation in the area

of natural sciences and ecology. Excellent students are offered the possibility to study abroad within the Erasmus Programme (e.g. at Universidad de Murcia in Spain, Oulu University of Applied Sciences in Finland, Friedrich Schiller University of Jena in Germany, etc.).

Study programmes in the Pedagogy of Academic Subjects and the Pedagogy of Professional Subjects and Practical Preparation is usually realised as a combination study in two specialisation subjects or as a one specialisation subject at a master's level. The future teachers who wish to teach one more specialisation are provided with the continuing education in external form by the Faculty, as stated in the legislation in force.

The future teachers are prepared for teaching at the secondary level of primary schools, secondary grammar schools and secondary vocational schools. Their pedagogical qualification is guaranteed by the courses of pedagogical-psychological basis, by passing didactic professional courses, and by classroom experience and (continuous) pedagogical practice.

Graduates of the non-teaching study programme of Environmental Chemistry, Environmental Management, System Ecology, Geography and Landscape Ecology, Mathematics, Mathematical Statistics and Financial Mathematics, Applied Computer Science, and Applied Geology become experts in the practice.

The Doctoral study programmes of Mathematical Analysis, Probability and Mathematical Statistics, Theory of Mathematics Education, Evolution of Ecosystems and their Protection, and Subject Didactics are focused on the graduates' acquirements in the latest scientific findings reflecting the current state of scientific research in the respective study programme.

Lectures and seminars in all study programmes are given within the premises of the Faculty of Natural Sciences MBU in Banská Bystrica. As for material-technical support, it fully corresponds to a degree of study and to a specialisation of the accredited study programme. Lectures and seminars are held in lecture halls, specialised classrooms used for experimental teaching of computer science, engineering and technologies, chemistry, physics, biology; computer classrooms, GIS classroom, collections, and libraries of the individual departments. The building houses the University Library with reading rooms of specialised magazines, periodicals, with audio-visual equipment and access to on-line library system. In addition to specialised classroom, Internet access is provided within the premises of the Faculty.

**Coordinator for students with special needs:**

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