

## Why study Bachelor's degree program Environmental Studies?

Bachelor study program "Environmental Studies" in English is one of the few study programs created by the needs of the labor market. This program provides education in a world language which constitutes an essential communication tool both in multinational companies as well as international research teams. Summary of the study program "Environmental Studies" consists of integrating interdisciplinary scientific disciplines useful for the needs of the knowledge society in the international arena. This greatly differs from the single-subject bachelor study programs that do not provide a sufficiently broad basis for interdisciplinary approaches needed to practice. Graduates of the study program "Environmental Studies" will understand the characteristics and attributes of the components of the environment including humans. They also gain knowledge in interdisciplinary fields of study characterizing the basic biotic and abiotic components of the landscape such as botany, geology, zoology, geography, pedology, and hydrology. Their successors further improve their knowledge in the field of ecology, landscape ecology, biodiversity, chemistry, geochemistry, and protection of natural resources. Attention is also paid to environmental planning, sustainable development, and risk assessment of geological hazards. Graduates will be prepared for work-oriented rational land use, sustainable development, production and environmental protection, and geohazards assessment geopotential country as well as the preparation and implementation of projects related to geological, hydrological, biological and geographical environment components. A comprehensive study of basic subjects of natural sciences will allow graduates to be familiar with environment and be able to predict its development, especially in relation to human intervention in the environment. Graduated further acquire basic knowledge on the functioning and administration of the company, the needs and possibilities of the environment, learn the basics of management and legislation in force in geology in environmental protection. It can be applied in executing professional tasks in the field of protection and land use and nature.

One of the advantages of the study program is a relatively small target group, approx. 20 persons, allowing improved learning with focusing on individuals. In selection of applicants for study age as well as socio-economic status, gender structure, ethnicity, disability or origin, nationality, and other criteria that could be discriminatory, will not be determining. This target group will include graduates after passing the entrance exam. In addition, a very similar specialized bachelor's degree program was created by this faculty in the past and provided the necessary expertise for the implementation of such programs.

Therefore, this study program can be fully incorporated into the offer of an educational institution, thus enabling science higher education in the English language for applicants from Slovakia, 3but especially from abroad. Making quality education in a world language is the possibility for graduates in the international labor market and significantly increases their competitiveness.

Graduates of the study program Environmental Studies receive the following skills:

- Good theoretical education in botany, ecology, zoology, geology, hydrogeology, soil science, geochemistry, chemistry, geography and computing;
- Solving scientific problems on a multidisciplinary level;
- Ability to evaluate obtained data correctly;
- Basic principles of intellectual property protection;
- Work with literature and electronic database;
- Professional English at a high level.

### Courses

#### First Year

| <b>Courses</b>  | <b>Semester</b> | <b>Lecture</b> | <b>Practical</b> | <b>Seminar</b> | <b>Credits</b> |
|---|-----------------|----------------|------------------|----------------|----------------|
| General and Inorganic Chemistry<br><i>Galamboš M.</i> | W               | 2              | 2                | 2              | 7              |
| Botany<br><i>Kováčik L.</i>                           | W               | 4              | 2                | 0              | 7              |
| Geology 1<br><i>Hók J.</i>                            | W               | 2              | 1                | 0              | 4              |
| Professional English (1)<br><i>Cíhová J.</i>          | W               | 0              | 0                | 2              | 2              |
| Global Environmental Problems<br><i>Čerňanský S.</i>  | W               | 0              | 0                | 4              | 4              |
| Geography<br><i>Križan F.</i>                         | W               | 2              | 1                | 0              | 4              |
| Professional English (2)<br><i>Cíhová, J.</i>         | S               | 0              | 0                | 2              | 2              |
| Zoology<br><i>Kodada J.</i>                           | S               | 4              | 2                | 0              | 7              |
| Geology 2<br><i>Hók, J.</i>                           | S               | 2              | 1                | 0              | 4              |
| Ecology<br><i>Kováč V.</i>                            | S               | 4              | 0                | 2              | 7              |
| Organic Chemistry                                     | S               | 2              | 2                | 2              | 6              |

|  |   |   |        |   |   |
|--|---|---|--------|---|---|
| <i>Koiš P.</i>   |   |   |        |   |   |
| Excursion in Botany and Zoology<br><i>Jančovičová S.</i> | S | 0 | 1 week | 0 | 2 |

## Second Year

| Courses  | Semester | Lecture | Practical | Seminar | Credits |
|--|----------|---------|-----------|---------|---------|
| Conservation Biology<br><i>Bohuš M.</i>              | W        |         | 0         | 6       | 6       |
| Landscape Ecology<br><i>Paudišová E.</i>             | W        | 2       | 3         | 0       | 6       |
| Demography and Population Studies<br><i>Bleha B.</i> | W        | 2       | 1         | 0       | 4       |
| Hydrogeology<br><i>Fendeková, M.</i>                 | W        | 2       | 1         | 0       | 4       |
| Soil Science<br><i>Dlapa P.</i>                      | W        | 3       | 2         | 0       | 6       |
| Excursion in Geology<br><i>Hók J.</i>                | W        | 0       | 1 week    | 0       | 2       |
| Analytical Chemistry<br><i>Hutta M.</i>              | S        | 2       | 2         | 1       | 6       |
| Economic and Social Geography<br><i>Horňák M.</i>    | S        | 2       | 2         | 0       | 5       |
| Biostatistics<br><i>Kováč, V.</i>                    | S        | 2       | 2         | 0       | 5       |
| Environmental Geochemistry<br><i>Hiller E.</i>       | S        | 2       | 1         | 0       | 4       |
| Practical Training<br><i>Fedor P.</i>                | S        | 0       | 3 weeks   | 0       | 6       |

## Third Year

| Courses   | Semester | Lecture | Practical | Seminar | Credits |
|---|----------|---------|-----------|---------|---------|
| Bachelor Seminar (1)<br><i>Fedor P.</i>                               | W        | 0       | 0         | 2       | 2       |
| Environmental Chemistry<br><i>Chmielewská E.</i>                      | W        | 3       | 0         | 0       | 4       |
| Monitoring of Natural and Sewage Waters Quality<br><i>Ženišová Z.</i> | W        | 2       | 1         | 0       | 4       |
| Renewable Energy Sources<br><i>Fendek M.</i>                          | W        | 2       | 0         | 1       | 3       |
| Biodiversity and Environmental Indicators<br><i>Fedor P.</i>          | W        | 2       | 1         | 0       | 4       |
| Environmental Planning and Management                                 | W        | 3       | 0         | 1       | 5       |

|   |   |   |   |    |   |
|---|---|---|---|----|---|
| <i>Pavličková K.</i>                              |   |   |   |    |   |
| Bachelor seminar (2)<br><i>Fedor, P.</i>          | S | 0 | 0 | 2  | 2 |
| Bachelor thesis<br><i>Fedor P.</i>                | S | 0 | 0 | 10 | 2 |
| Defense of the Bachelor Thesis<br><i>Fedor P.</i> | S | 0 | 0 | 0  | 8 |
| Natural Hazard and Risks<br><i>Minár J.</i>       | S | 2 | 1 | 0  | 4 |
| Environmental Assessment<br><i>Pavličková K.</i>  | S | 2 | 0 | 1  | 4 |
| Geoinformatics and GIS<br><i>Mičietová E.</i>     | S | 2 | 2 | 0  | 4 |

### Additional courses (A and B block alternative)

#### Block A: Sustainable Development

| <b>Courses</b>   | <b>Year</b> | <b>Semester</b> | <b>Lecture</b> | <b>Practical</b> | <b>Seminar</b> | <b>Credits</b> |
|--|-------------|-----------------|----------------|------------------|----------------|----------------|
| Geocology<br><i>Matečný I.</i>   | 2           | S               | 0              | 0                | 2              | 2              |
| Sustainable Development<br>Tools <i>Pavličková K.</i>                          | 2           | S               | 1              | 0                | 1              | 2              |
| Landuse Planning<br>Management<br><i>Adamcová R.</i>                           | 2           | S               | 2              | 0                | 0              | 3              |
| Exploration, Mining,<br>Drilling <i>Bednárík M.</i>                            | 3           | S               | 2              | 0                | 0              | 3              |
| Methods of Engineering<br>Geological Investigation<br><i>Adamcová R.</i>       | 3           | S               | 2              | 1                | 0              | 3              |
| Local Development, Urban<br>Economics and Public<br>Finance<br><i>Buček J.</i> | 3           | S               | 2              | 1                | 0              | 3              |

#### Block B: Environmental Risk Assessment

| <b>Courses</b>   | <b>Year</b> | <b>Semester</b> | <b>Lecture</b> | <b>Practical</b> | <b>Seminar</b> | <b>Credits</b> |
|--|-------------|-----------------|----------------|------------------|----------------|----------------|
| Hydrology and<br>Hydroclimatology<br><i>Fendeková M.</i> | 2           | W               | 2              | 1                | 0              | 3              |
| Biological Invasions<br><i>Kováč V.</i>                  | 2           | S               | 2              | 0                | 0              | 2              |
| Basic Ecotoxicology<br><i>Fargašová A.</i>               | 2           | S               | 2              | 0                | 0              | 2              |
| Geohazard Mitigation                                     | 3           | W               | 2              | 2                | 0              | 5              |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| <i>Adamcová A.</i>                                  |   |   |   |   |   |   |
| Applied Conservation<br>Biology <i>Ružičková J.</i> | 3 | S | 0 | 1 | 2 | 3 |
| Environmental Monitoring<br><i>Doričová M.</i>      | 3 | S | 0 | 1 | 2 | 3 |

### Optional Courses

| <b>Courses</b>  | <b>Year</b> | <b>Semester</b> | <b>Lecture</b> | <b>Practical</b> | <b>Seminar</b> | <b>Credits</b> |
|---|-------------|-----------------|----------------|------------------|----------------|----------------|
| Climatology<br><i>Melo M.</i>                                   | 1,2         | W               | 0              | 0                | 2              | 2              |
| Soil Biology<br><i>Simonovičová A.</i>                          | 1,2         | W               | 2              | 0                | 0              | 2              |
| Seminar on Organic<br>Chemistry<br><i>Koiš P.</i>               | 1           | S               | 0              | 0                | 2              | 2              |
| Applied Geophysics<br><i>Bielik M.</i>                          | 1,2         | S               | 2              | 1                | 0              | 3              |
| Geochemistry of Natural<br>Waters<br><i>Lánczos T.</i>          | 3           | W               | 0              | 0                | 3              | 3              |
| Methods of Hydrogeological<br>Investigation<br><i>Fendek M.</i> | 3           | W               | 2              | 1                | 0              | 3              |

### Career for graduates of the study program Environmental Studies

Bachelor study program "Environmental Studies" in English brings many benefits to its graduates. One of them is more likely success in the labor market in multinational groups and companies with foreign participation after graduation. Graduates will also improve opportunities in international institutions and employment opportunities abroad. The study raises the possibility of involvement in international mobility, respectively gives the possibility to study the subsequent levels of higher education (master, doctorate) at leading foreign educational and scientific institutions. In addition, it allows continuing the study at the graduate level at the Faculty of Natural Sciences, in a wide range of study programs of Geology, Geography, and Environmental Science departments.

Graduates familiar with the problems of natural sciences with excellent professional language skills needed to study in English have a significantly better position in the labor market of knowledge society across the European Union. Graduates who are able to deal with professional issues in English language smoothly are in demand of the labor market, especially in companies with foreign capital participation, state institutions and public sector,

which is heavily involved in international cooperation. All acquired knowledge can be applied in the institutions of both state and local government, in consulting firms and non-governmental organizations dealing with issues of environmental protection. Graduates will thus become experts on land management, whose knowledge is in demand of the labor market.

These experts will be very well applicable for example in scientific and industrial parks, as well as in European structures, etc. Their obtained knowledge and skills can be positively used by future employers of environmental education, scientific institutions, government and public sector, government and private sector, not only in Slovakia but also abroad.