



Univerza v Novem mestu
*Fakulteta za poslovne
in upravne vede*

**CLEAN COPY OF THE ACCREDITED
STUDY PROGRAMME
1st CYCLE**

ENVIRONMENTAL MANAGEMENT

(higher education professional study programme)

Novo mesto, December 2020

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1 GENERAL INFORMATION ABOUT THE PROGRAMME

Study Programme:	Environmental Management
Cycle:	first
Type:	1st cycle
Duration:	3 years
ECTS amount:	180 ECTS
Klasius P-16:	0521 – Environmental sciences
Research area (Frascati classification):	natural sciences
SOK (Slovene classification framework)	level 7
EOK (European classification framework)	level 6
EOVK (European higher education classification framework)	first cycle
Accreditation:	Council for Higher Education of the Republic of Slovenia, decision No. 6033-130/2020/7 on 19 November 2020.

2 FUNDAMENTAL OBJECTIVES AND COMPETENCES

1.1 Fundamental objectives of the study programme

The undergraduate study programme Environmental Management is prepared in accordance with KLASIUS-P-16 requirements, field 0521 ENVIRONMENTAL SCIENCES, and the scientific discipline according to the FRASCATI classification 01 Natural sciences. It includes the course-specific content dealing with the study of organisms in relation to other organisms and the environment. The content of the study programme follows the provisions of the Environmental Protection Act.

In adopting policies, strategies, programmes, plans and general legal acts, the state and the local environment must consider, as the standard, the health, well-being and quality of life of humans, as well as survival, protection from environmental incidents, health and well-being of other living organisms. In order to be able to plan and implement environmental protection policy and strategy, the state and the local environment need adequately qualified professionals.

The main objectives of environmental protection and management are:

- preventing and reducing environmental impact,
- maintaining and improving environmental quality,

- sustainable use of natural resources,
- reducing energy consumption and increasing the use of renewable energy sources,
- eliminating the effects of environmental impacts,
- improving the disturbed natural balance and restoring its regenerative capacity, increasing the material efficiency of production and consumption, and phasing out and replacing the use of hazardous substances.

The field of environmental protection and management itself requires interdisciplinary knowledge in the following areas: prevention of major disasters and reduction of their consequences, knowledge of rules necessary for prevention and reduction of environmental impact, waste management, knowledge of environmental quality standards, target values, action values, alert thresholds and critical levels, environmental pollution reduction levels and related measures, implementation of environmental protection measures, collaboration with companies, sole proprietors, institutions and other organisations responsible for informing and communicating with the public, etc.

1.2 General competences

Graduates develop the competence to:

- analyse, synthesize and anticipate the solutions and consequences in the area of environmental protection,
- record and define environmental problems, analyse problems and prepare professionally justified solutions,
- use scientific methods in solving professional problems,
- recognize the objectives and indicators of sustainable development,
- communicate and master professional terminology from the field of environmental protection and nature protection,
- intensively transfer the knowledge to users,
- apply the acquired knowledge in practice.

1.3 Course-specific competences

The main course-specific competences represent only a part of the abovementioned competences in individual learning units, and refer to:

- knowledge and understanding of the concepts from the history of environmental movements and environmental policies,
- knowledge and understanding of chemical, physical and biological processes and concepts,
- analysis and identification of environmental epidemiology factors and planning of health risk management activities,
- understanding the legislation on environmental protection and connection with other types of knowledge concerning legal problems in the field of environmental protection at national and international level,
- performing professional work and tasks in various economic and public administration sectors at national and international level,

- ability to understand all aspects of environmental impact assessment, including public health,
- ability to assess environmental conditions at local, national and international levels, and prepare a professional referential basis for decision-making,
- ability to evaluate nature and the processes of granting the natural value status at the professional and administrative levels,
- ability to define ecosystems, species and habitats for individual cases and areas,
- understanding environmental economy and economic policy as well as the financial aspects of environmental management,
- understanding the importance and forms of public participation in co-decision-making on environmental matters,
- use of information and communication technology, and sources of information, with an emphasis on on-line public databases and services in the EU.

3 INTERNATIONAL COOPERATION OF THE INSTITUTION

In 2011, the Erasmus University Charter (ECHE) was implemented for the first time, with which the Faculty gained the right to international exchanges of higher education teachers, students and to participate in the European projects. The ECHE document was renewed in 2013 for the period 2014-2020.

The Faculty develops its international activity in four areas:

- organization of international scientific conferences,
- exchange of students and higher education teachers/staff,
- participation in international research projects, and
- individual contacts of pedagogical staff, researchers and associates.

4 CURRICULUM WITH ECTS (CREDIT POINTS) VALUES OF INDIVIDUAL STUDY OBLIGATIONS

The study programme has been designed in accordance with the provisions of the Higher Education Act, and the criteria for accreditation of study programmes. It is evaluated according to Criteria for Credit Assignment to Study Programmes According to ECTS.

4.1 Number of learning units with ECTS

The following table shows the list of course unit names and the number of hours by individual semester and year, number of hours of organised study work, number of hours of individual student work, annual student workload and credit evaluation according to ETCS.

Table 1: Curriculum with a credit evaluation

No.	Learning unit	OSW					OSW	ISW	ASW	ECTS
		L	T	LW	FW	PT				
	YEAR 1									
	Semester 1									
1.	Introduction to Environmental Protection and Sustainable Development	45	30				75	100	175	7
2.	Environment and Health	30	15				45	80	125	5
3.	Applied Mathematics	30	45				75	100	175	7
4.	Professional Foreign Language (English, German)	15	30				45	80	125	5
5.	Environmental Chemistry	30		30			60	90	150	6
	Semester 2									
6.	Fundamentals of Research	30	15	15			60	90	150	6
7.	Biology with Microbiology	30		30			60	90	150	6
8.	Environmental Physics and Meteorology	30		15			45	80	125	5
9.	Environmental Protection Core Content	45	30				75	100	175	7
10.	Environmental Information Systems	30		30			60	90	150	6
	TOTAL:	315	165	120	0	0	600	900	1500	60

Legend: L= lectures, T = tutorials, LW = laboratory work, FW = field work, PT = professional training, OSW = organised study work, ISW = individual student work, ASW = annual student workload, ECTS = European Credit Transfer System points

No.	Learning unit	OSW					OSW	ISW	ASW	ECTS
		L	T	LW	FW	PT				
	YEAR 2									
	Semester 3									
1.	Environmental Economy	30	30				60	90	150	6
2.	Environmental Statistics	30	15	15			60	90	150	6
3.	Business Communication	30	15				45	80	125	5
4.	Environmental Monitoring	45			30		75	100	175	7
5.	Environmental Law	30	30				60	90	150	6
	Semester 4									
6.	Biotic Diversity and Nature Protection	30	15		15		60	90	150	6
7.	Environmental Epidemiology and Health Risk Management	30	15				45	80	125	5
8.	Activities Affecting the Environment	45	30				75	100	175	7
9.	Landscape Architecture	30	30				60	90	150	6
10.	Elective course 1	30	30				60	90	150	6
	TOTAL:	330	210	15	45	0	600	900	1500	60

Legend: L= lectures, T = tutorials, LW = laboratory work, FW = field work, PT = professional training, OSW = organised study work, ISW = individual student work, ASW = annual student workload, ECTS = European Credit Transfer System points

No.	Learning unit	OSW					OSW	ISW	ASW	ECTS
		L	T	LW	FW	PT				
	YEAR 3									
	Semester 5									
1.	Food Chain and Health	30	30				60	90	150	6
2.	Integrated Water Management	30			30		60	90	150	6
3.	Financial Aspects of Environmental Management	30	30				60	90	150	6
4.	Elective course 2	30	30				60	90	150	6
	Semester 6									
5.	Elective course 3	30	30				60	90	150	6
6.	Waste Management	30			30		60	90	150	6
7.	Practical Training					360	360	0	360	18
8.	Diploma Thesis	5					5	145	150	6
	TOTAL:	185	120	0	60	360	725	685	1410	60

Legend: L= lectures, T = tutorials, LW = laboratory work, FW = field work, PT = professional training, OSW = organised study work, ISW = individual student work, ASW = annual student workload, ECTS = European Credit Transfer System points

Commitment overview	L	T	LW	FW	PT	OSW	ISW	ASW	ECTS
Year 1									
Year 2	330	210	15	45	0	600	900	1500	60
Year 3	185	120	0	60	360	725	685	1410	60
TOTAL	830	495	135	105	360	1925	2485	4410	180

The study programme lasts three years, i.e. six semesters. It comprises 4410 hours amounting to 180 ECTS and includes both organised study work and individual student work. It consists of the core and elective part. The core part of the programme is conducted in the first year, comprises 10 courses (60 ECTS) and is compulsory for all students. The elective part of the programme is implemented in the second and third year.

Elective section of the programme

The programme allows students to plan their individual studies. Students can choose among the elective units offered by the faculty amounting to 18 ECTS. This is made possible by the elective courses in the second and third year.

Elective courses

In the second and third year the elective courses enable students to design their own study programme according to their individual needs. They choose one elective course (6 ECTS) in the second year and two elective courses in the third year, which they can take at their home faculty or at any second cycle study programme in Slovenia or abroad, at the institution with which the faculty has an agreement.

The elective courses are conducted in such scope as the number of groups of tutorials would be if only one elective course were conducted.

Table 2: Elective courses

No.	Learning unit	OSW			OSW	ISW	ASW	ECTS
		L	T	FW				
1.	Health Risk Assessment	30	30		60	90	150	6
2.	Environmental Impact Assessment Methods	30		30	60	90	150	6
3.	Sustainability and Environmental Management	30	30		60	90	150	6
4.	Sustainable Management of Built Environment	30	30		60	90	150	6
5.	Sustainable Design	30	30		60	90	150	6
6.	Circular Economy	30	30		60	90	150	6
7.	Karstic Natural Resources	30	15	15	60	90	150	6

Legend: L= lectures, T = tutorials, FW = field work, OSW = organised study work, ISW = individual student work, ASW = annual student workload, ECTS = European Credit Transfer System points

4.2 Learning units and their placement in the programme structure

The study programme lasts three years, i.e. six semesters. The first year consists of 10 core study courses. The second year consists of: 9 core study courses and one elective course (6 ECTS). The third year consists of 4 core study courses (34 ECTS), two elective courses (12 ECTS), professional training (18 ECTS) and the diploma thesis (6 ECTS). The study programme comprises a total of 26 courses (156 ECTS), professional training (18 ECTS) and the diploma thesis (6 ECTS).

The content of the study programme consists of the core content from the field of environmental protection and management, as well as the general content (applied mathematics, professional foreign language, fundamentals of research, business communication), which will support and qualify the graduates to collect and evaluate the data and information about the environmental impact with the help of a qualitative and

quantitative analysis and to present the results to a close audience and the general public. The majority of the compulsory study literature for all courses/learning units is in the Slovenian language.

Core learning units, such as Introduction to Environmental Protection and Sustainable Development, Environmental Chemistry, Environmental Physics and Meteorology, Environmental Protection Core Content, Environmental Monitoring, Environmental Law and Activities Affecting the Environment, provide the basic knowledge from the field of environmental protection and management. The content of the core learning units corresponds to 41 ECTS or 22.7% of the study programme.

The technical learning units are the core of the study programme where students can acquire the core professional knowledge from the field of environmental protection and management. These learning units include: Environment and Health, Biology with Microbiology, Environmental Information Systems, Environmental Economy, Environmental Statistics, Environmental Epidemiology and Health Risk Management, Landscape Architecture, Food Chain and Health, Integrated Water Management, Financial Aspects of Environmental Management, Waste Management, Practical Training and Diploma Thesis. The content of these learning units corresponds to 86 ECTS or 47.8% of the study programme.

The core content of the business and administration studies provides the knowledge from the areas of Applied Mathematics, Professional Foreign Language (English, German), Fundamentals of Research, Communication Methods and Circular Economy relevant for the work of a graduate environmental management engineer. Their contents account for 29 ECTS or 16.1% of the study programme.

The elective part of the study programme allows students to deepen and broaden their knowledge in specific areas of environmental protection and management as well as in other interdisciplinary fields, depending on their interests. All elective courses are technical in nature: Health Risk Assessment, Environmental Impact Assessment Methods, Sustainability and Environmental Management, Sustainable Management of Built Environment, Sustainable Design, Circular Economy and Karstic Natural Resources. Elective courses can be chosen from the list of courses defined by the faculty, including courses organised by other faculties in Slovenia with which the faculty has concluded an agreement, as well as courses from comparable study programmes throughout Europe available through a mobility programme. Each student chooses three elective courses amounting to 18 ECTS or 10% of the study programme, one in the second year and two in the third year.

Professional training is a compulsory part of the study programme. It takes place over a period of nine weeks and comprises 360 hours, equivalent to 18 ECTS or 10% of the study programme, and is carried out in the immediate working environment that includes the main areas of activity of our Environmental graduate.

4.3 The ratio of lectures, tutorials and other organised forms of study

The programme comprises 4410 hours (180 ECTS), of which 1500 hours are in the first and second year and 1410 hours in the third year. Organised study work accounts for 43.65%, of which 18.82% are lectures and 24.83% are tutorials (8.16% are for professional training). Individual student work accounts for 56.30% of the programme.

Table 3: The ratio of lectures, tutorials and other organised forms of study

Year	OSW		OSW	ISW	ASW	in ECTS
	L	T				
1.	315	285	600	900	1500	60
2.	330	270	600	900	1500	60
3.	185	540	725	685	1410	60
TOTAL in hours	830	1095	1925	2485	4410	180
TOTAL IN %	18,82	24,83	43,65	56,35	100	100

Forms of study work are: lectures, seminar exercises, laboratory exercises and field work. Organized individual forms of work with students are conducted in the form of consultations and student-teacher conferences. Individual student work includes consistent work and preparation for lectures, review of literature, preparation for preliminary examinations and exams, writing term papers or other written assignments as defined by the study plan of each learning unit.

Organised study work

Lectures are an organised form of study work conducted simultaneously for all enrolled students. The course lecturer imparts the basic knowledge and the latest findings of their subject, encourages students to participate actively, to reflect critically through the use of modern teaching and learning methods with the support of ICT.

Tutorials are an organized form of study work that serve to refresh, consolidate and deepen the learning content taught in lectures. The learning environment is stimulating and information-rich, encouraging creativity, imagination and positive communication. Work is carried out individually and in groups. The active role of the individual and interdependence in achieving the ultimate objectives are important. The learning units that include tutorials are evident from the syllabus and individual curricula.

Laboratory work in a laboratory allows for discovery, inquiry-based learning, or scientific investigation. During laboratory work, students gain experience and begin to think in terms of cause and effect. The teacher guides them, and teaches them careful observation and data recording. Systematic observation includes describing, asking questions, making predictions, verifying (testing) and explaining. The work is carried out in smaller groups (15-18 students). The learning units that include laboratory work are evident from the syllabus and individual curricula.

Field work is done in the courses Environmental Monitoring, Biotic Diversity and Nature Protection, Integrated Water Management, Waste Management and in the elective course Environmental Impact Assessment Methods. The work is carried out in groups of 12 to 15 students.

Professional training. The purpose of professional training is to educate prospective professionals in a real work environment; transfer knowledge from the higher education institution to the actual work environment and back; and adapt the study programme to the needs of the work environment.

Individual student work comprises regular work, writing seminar papers and other written contributions, literature review, preparation for examinations, and writing the bachelor's thesis.

4.4 Practical training within the programme, implementation and ECTS

The professional training is an organized part of the higher professional study program and consists of 360 hours in the third year.

5 ACCESS REQUIREMENTS AND CRITERIA FOR THE SELECTION OF CANDIDATES IN THE EVENT OF ENROLMENT RESTRICTIONS

The enrolment requirements for the study programme according to Article 38 of the Higher Education Act are:

- Completed Matura or Vocational Matura Exam,
- Completed Final Exam in any four-year secondary education programme,
- Completed Final Exam in any four-year secondary education programme before 1 June 1995.

Criteria for the selection of candidates in the event of enrolment restriction

In the event of a decision on enrolment limits, candidates will be selected on the basis of overall results in the Matura, Vocational Matura or Final Exam (60%) and overall learning results in the third and fourth years (40%).

6 CRITERIA FOR RECOGNITION OF SKILLS AND COMPETENCES GAINED BEFORE ENROLMENT

Upon written application of the candidate, enclosed certificates and other documentation, the faculty will recognise the knowledge and training that corresponds in whole or in part to the general or course-specific competences of the study programme.

If the knowledge was acquired in the formal/informal forms of education, candidates prove this knowledge with certificates and other documents ("atypical certificates", portfolios, confirmations of completed parts of study programmes, courses and other forms of education) that clearly indicate the content of these programmes and the scope of student work. Students enrolling in the second year according to the Criteria for Transfers between Study Programmes, must fulfil at least 60 ECTS in the study programme.

The student may get an individual exam, which they have previously accomplished, recognised if it corresponds to at least 60% in content and scope to the course of the new study programme. In this case, the grade attained previously, and the number of ECTS allocated to the course in the new programme will be credited.

If the candidate has acquired their previous knowledge through self-education or experiential learning, they can apply for verification and assessment of the knowledge at the Faculty.

Individual documented requests by candidates for recognition of knowledge acquired before enrolment are handled by a special committee in accordance with the procedures and rules regarding the recognition of examinations, adopted by the Faculty Senate.

7 ASSESSMENT METHODS

The methods of assessing knowledge are designed to provide higher education teachers and students with continuous high-quality information about progress toward and

achievement of established competences/objectives of the study programme. The study programme requires students to learn on a regular basis; therefore, the forms of knowledge assessment include diagnostic, formative, and summative assessments conducted before, during, and after individual courses.

Planned methods of knowledge review and assessment include: written examinations, preliminary examinations, seminar exercises, project assignments, exercise portfolio, oral presentations, solving real problems, regular study work, practical training, diploma.

These methods of reviewing and assessing knowledge are performed individually.

The obligations of all programme study courses are the same. They include: active participation in lectures and exercises, successfully prepared term paper including presentation and oral submission, and successfully passed examination.

To receive a passing grade, students must achieve at least 55% of the required score. The processes and rules for reviewing and assessing knowledge as well as processes for recognition of ECTS-credit points acquired in other programmes of the same or other higher education institutions, are subject to special rules.

The methods of reviewing and assessing knowledge as well as the criteria for the final grade are included in the individual study plans. At the beginning of the study process, each course leader presents the implementation plan of the learning unit to the students, together with the study obligations and the proportions that individual components of reviewing and assessing knowledge and skills contribute to the final grade.

Table 4: Grading scale in line with the ECTS assessment scale

Grade		Grade according to ECTS Criteria		Grading criteria %	Description of knowledge
10	odlično	A	excellent	95 – 100 %	Outstanding performance with only minor errors
9	prav dobro	B	very good	85 – 94 %	Above-average standard but with some errors
8	prav dobro	C	good	71 – 84 %	Generally sound work with a number of notable errors
7	dobro	D	satisfactory	61 – 70 %	fair knowledge but with significant shortcomings
6	zadostno	E	sufficient	55 – 60 %	knowledge meets the minimum criteria
5 - 1	insufficient	F	fail	< 55	knowledge does not meet the minimum criteria
*	successful	P	pass	55 – 100 %	knowledge meets the minimum criteria
*	unsuccessful	F	fail	< 55	knowledge does not meet the minimum criteria

*the grades “successful” and “unsuccessful” are used for grading the knowledge and accomplished obligations in Professional training.

8 PROGRESSION REQUIREMENTS FOR THE PROGRAMME

The advancement conditions for the second year are: Fulfilment of the study obligations of the first year of study to the extent of at least 45 ECTS and completion of all exercises required in the programme.

The advancement conditions for the third year are: Fulfilment of first year study obligations (60 ECTS), fulfilment of second year study obligations to the extent of at least 45 ECTS and completion of all exercises required by the programme.

Advancement to the next year of study without fulfilling the study obligations: Exceptionally, students may advance to the next year of study even if they have not achieved the required ECTS credit points provided they can give a justifiable reason. Reasons considered justifiable are defined in the Statutes of the University of Novo mesto, Faculty of Business and Management.

9 PROVISIONS ON TRANSFERS BETWEEN STUDY PROGRAMMES

According to the Criteria for transferring between study programmes (Official Gazette of the Republic of Slovenia No. 14/19), transfers are possible between study programmes of the same cycle, which ensure the acquisition of comparable competences or learning outcomes after completion of the study programme, if at least half of the obligations from the first study programme related to the compulsory courses of the second study programme can be recognised as European Credit Transfer and Accumulation System (ECTS) credit points according to the Criteria for the recognition of previous education.

The criteria for transferring between study programmes are:

- Meeting admission requirements of the study programme,
- Number of places available,
- Comparability of the competences or learning outcomes acquired by the student in the first study programme.

The decision on whether the criteria for transferring between study programmes are met and the determination of the differences between two study programmes shall be made by the competent commission.

10 MODES OF STUDY

The study programme is performed in full-time and part-time modes. Both modes are of equal value. In the case of part-time mode of study, one year is normally conducted in one academic year.

The study is performed according to the valid normative and study calendar.

Organised study work in *part-time study* is organised consecutively, one course at a time. Each course begins with lectures, followed by tutorials in groups and examinations. The same order is organised for all courses. Part-time students must complete all obligations foreseen for full-time study.

Online Study is not foreseen, except in exceptional cases where students' circumstances change during the course of their studies, in which case the faculty senate makes the decision. This applies only to individual learning units or their parts.

11 REQUIREMENTS FOR COMPLETION OF THE STUDY

A prerequisite for the completion of the study is successful completion of all study obligations required by the programme to the extent of 180 ECTS.

The condition for the completion of the study in case of inclusion in the third year of the study programme in accordance with the Criteria for transferring between study programmes is the successful completion of all study obligations required by the programme to the extent of 60 ECTS.

12 REQUIREMENTS FOR COMPLETING THE PART OF THE STUDY PROGRAMME

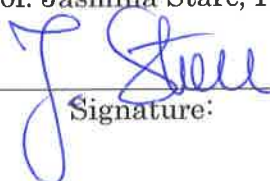
The study programme does not contain individual parts.

13 PROFESSIONAL TITLE

Upon completion of the study, the student acquires a professional title in accordance with the Professional and Scientific Titles Act: diplomirana okoljevarstvenica (VS), abbreviated dipl. okoljevar. (VS) or diplomirani okoljevarstvenik (VS), abbreviated dipl. okoljevar. (VS).



Prof. Jasmina Starc, PhD


Signature: