

INFORMATION PACKAGE 2024

**INTERDISCIPLINARY DOCTORAL PROGRAMME IN
ENVIRONMENTAL PROTECTION**



Name of study programme	Environmental Protection
Programme characteristics	interdisciplinary
Type	doctoral
Cycle	doctoral
KLASIUS-SRV	Education leading to doctorate of science (third Bologna cycle)/Doctorate of science (third Bologna cycle) (18202)
KLASIUS-P-16	<ul style="list-style-type: none"> • Inter-disciplinary programmes and qualifications involving arts and humanities (0288) • Inter-disciplinary programmes and qualifications involving social sciences, journalism and information (0388) • Inter-disciplinary programmes and qualifications involving business, administration and law (0488) • Environment not further defined (0520) • Inter-disciplinary programmes and qualifications involving natural sciences, mathematics and statistics (0588) • Environmental protection technology (0712) • Inter-disciplinary programmes and qualifications involving engineering, manufacturing and construction (0788) • Inter-disciplinary programmes and qualifications involving agriculture, forestry, fisheries and veterinary (0888) • Inter-disciplinary programmes and qualifications involving health and welfare (0988) • Community sanitation (1021) • Inter-disciplinary programmes and qualifications involving services (1088)
University of Ljubljana programme organising members	<ul style="list-style-type: none"> • Biotechnical Faculty, Jamnikarjeva ulica 101, 1000 Ljubljana, Slovenija • School of Economics and Business, Kardeljeva ploščad 17, 1000 Ljubljana, Slovenija • Faculty of Social Sciences, Kardeljeva ploščad 5, 1000 Ljubljana, Slovenija • Faculty of Civil and Geodetic Engineering, Jamova 2, 1000 Ljubljana, Slovenija • Faculty of Chemistry and Chemical Technology, Večna pot 113, 1000 Ljubljana, Slovenija • Faculty of Mathematics and Physics, Jadranska ulica 19, 1000 Ljubljana, Slovenija • Faculty of Maritime Studies and Transport, Pot pomorščakov 4, 6320 Portorož, Slovenija • Faculty of Mechanical Engineering, Aškerčeva 6, 1000 Ljubljana, Slovenija • Faculty of Arts, Aškerčeva 2, 1000 Ljubljana, Slovenija • Faculty of Medicine, Vrazov trg 2, 1000 Ljubljana, Slovenija • Faculty of Natural Sciences and Engineering, Aškerčeva cesta 12, 1000 Ljubljana, Slovenija • Faculty of Law, Poljanski nasip 2, 1000 Ljubljana, Slovenija

	<ul style="list-style-type: none">• Veterinary Faculty, Gerbičeva ulica 60, 1000 Ljubljana, Slovenija
Duration (years)	4
ECTS credits per academic year	60
Doctoral degree programme enrolment type	Part-time

The programme

The duration of the Interdisciplinary Doctoral Programme in Environmental Protection is four years (240 ECTS credits), and according to the Bologna educational scheme this represents the third cycle of education. The programme consists of organised classes (60 credits) and individual research work for the doctoral dissertation (180 credits). Interdisciplinary Doctoral Programme in Environmental Protection is evaluated according to the European Credit Transfer System (ECTS), thus allowing students and lecturers to participate in international exchange schemes in the countries where ECTS or some other comparable system is implemented. The programme is comparable with other similar programmes of foreign universities.

Basic programme goals

The main goal of the Interdisciplinary Doctoral Programme in Environmental Protection is the interdisciplinary education of highly qualified experts in the scientific fields covered by the programme. The programme has an interdisciplinary character and is intended for offering in-depth knowledge in different aspects of environmental issues ranging from technical and biotechnical to medical, social, and humanistic.

General competences

The goal of the programme is to qualify doctoral candidates in scientific thinking and in solving the demanding scientific problems in the area of the environmental protection with an interdisciplinary approach.

Specific competences

After the completion of the programme, doctoral graduates will be qualified for creative and independent research work and for solving scientific problems. They will be able to critically assess research results and capable of transferring new knowledge into practice.

Admission requirements

Candidates for the Interdisciplinary Doctoral Programme in Environmental Protection are graduates of the following programmes:

- Second cycle study programmes.
- Study programmes providing education for occupations regulated by Directives of the European Union, evaluated with at least 300 credits.
- Study programmes leading to specialisation provided that candidates have previously completed a higher education professional study programme. The Programme Council will specify additional entry requirements for candidates in individual areas amounting from 30 to 60 credits.
- Study programmes leading to a Master of Science or to specialisation after completing an academic study programme. 60 credits of study obligations will be recognised to such candidates.
- Academic study programmes.

Enrolment in the doctoral programme is also open to graduates of foreign universities. The equivalence of previously acquired education in a foreign country will be established by means of the procedure for the recognition of foreign qualifications for the purposes of further education in accordance with the Statutes of the University of Ljubljana. The procedure starts with the candidate's application for study in the Republic of Slovenia, which is submitted in electronic form on the eVŠ portal. The procedure is run by the authorised person at the respective UL faculty.

Criteria for selection of candidates

The selection of candidates is particularly at issue when the number of candidates significantly exceeds the number of places offered. Selection will be primarily based on the candidate's level of achievement in previous studies:

- Study success (grade point average and final thesis grade) – 50%
(40% for average grade more than 8 and 10% for the final thesis 9 or 10).

- Results of the selection exam – 50%

(30% for a brief concept of research work and 20% for evidence of award(s) and/or recognitions during study and/or evidence of previous scientific/ research work).

The Programme Council Environmental Protection determines the enrolment restrictions depending on the number of suitable candidates and mentors.

Recognition of knowledge and skills acquired before admission to the programme

Knowledge and skills obtained through formal and informal learning and experience obtained before enrolment to the programme will be taken into consideration when making a selection for the limited number of places. The knowledge and skills of candidates obtained before entry will be recognized by the Programme Council in accordance with the Rules of the University of Ljubljana on the procedure and criteria on the recognition of the knowledge and skills obtained through informal learning, and on the basis of written application of the candidates.

Grading System

The methods, formats and structure of examination and assessment enable UL students to adequately verify their learning outcomes and competences. Students' knowledge is tested and assessed on the basis of individual courses, and the forms of assessment are specified in the curricula of the subjects.

Knowledge assessment, including examination, is defined in the Statutes of the University of Ljubljana, Articles 128 to 150. In addition, some member faculties have also adopted their own Rules on knowledge assessment and grading. Examination results are published on notice boards of member faculties or on websites which allow students to compare their results with those of other participants in the examination through registration numbers or other passwords. Feedback on student progress is also given by some member faculties through praise and awards to the best students.

In accordance with Article 138 of the Statutes of the University of Ljubljana, success in examinations is assessed by a 10-point scale grading system:

- 10 - (excellent: exceptional results without or with negligible faults),
 - 9 - (very good: very good knowledge with some minor faults),
 - 8 - (very good: good knowledge with certain faults),
 - 7 - (good: solid knowledge but with several faults),
 - 6 - (sufficient: knowledge only meets minimal criteria),
 - 5 - 1 - (insufficient: knowledge does not meet minimal criteria).
- Positive pass grades range from sufficient (6) to excellent (10).

Success in examinations in doctoral programmes can also be assessed by grades:

fail,

pass,

pass with distinction.

The method of assessment is defined in the individual doctoral study programme.

The way assessment is carried out in the doctoral study programme Environmental Protection is determined by the programme curricula.

Requirements for progression through the programme

To progress from the first to the second year of study, doctoral students need to accumulate 45 credits. Of these, at least 30 credits must derive from compulsory methodological and other core courses.

Students, who have completed all organised study requirements in the first and the second year and have the confirmation of the positive assessment of the doctoral dissertation proposal by their Doctoral Studies Committee from the member Senate, can progress to the third year of doctoral study.

Students who have completed all study requirements in the first three years of study and have obtained the approval of the proposed doctoral dissertation proposal by the University Senate may progress into the fourth year of doctoral study.

Transfer between study programmes

Transfer between programmes is possible if candidates fulfil the access requirements of the programme. Applications for transfer of such candidates to the Interdisciplinary Doctoral Programme in Environmental Protection will be treated individually by the Programme Council in accordance with the Call for Enrolment into Doctoral Degree Programmes, Criteria for Transferring Between Study Programmes and the University Statutes.

Conditions for completing the programme

The conditions for completing the programme of study and acquiring the doctoral degree are the successful completion of all study requirements defined by the programme and the successful PhD viva. The doctoral student is obliged to publish at least one research article. The article with the student's name listed as first author must be published or accepted for publication in an internationally recognised scientific journal relating to individual scientific disciplines before the student hands in the doctoral dissertation for assessment. The Rules and Regulations for Doctoral Studies at the University of Ljubljana that are published at <https://www.uni-lj.si/study/doctoral/rules-regulation/> regulate the procedure for the acquisition of the scientific title of *doktor/doktorica znanosti* (level of qualification: SQF level 10, EQF level 8, EQ-EHEA level Third cycle).

Doctoral dissertation

The doctoral dissertation is a written work that signifies an independent and original contribution to the scientific field that the doctoral dissertation proposal pertains to. The doctoral dissertation at the University of Ljubljana is written in Slovene. Exceptionally, a candidate may write the doctoral dissertation in English if there are justified reasons therefor (a foreign candidate, supervisor or a member of the committee, or if the dissertation is composed of original research articles published in English). A doctoral dissertation in a foreign language may only be submitted together with an exhaustive summary in Slovene that must employ the appropriate Slovene professional terminology from the scientific field of the dissertation.

The registration of doctoral dissertation proposal, the nomination of academic advisors (supervisor and co-supervisor), as well as the nomination of a Doctoral Studies Committee are in the domain of coordinating faculty senates. The Senate of the University of Ljubljana confirms the doctoral dissertation proposal and the proposed supervisor(s).

STUDY PROGRAMME CURRICULUM

Year 1

Course title	ECTS
Interdisciplinary Scientific Research Work	10
Core course 1	10
Core course 2	10
Elective course 1	10
Individual research work	20
Total	60

Year 2

Course title	ECTS
Elective course 2	10
Doctoral seminar with presentation of the doctoral dissertation topic	5
Individual research work 2	45
Total	60

Year 3

Course title	ECTS
Individual research work 3	60
Total	60

Year 4

Course title	ECTS
Individual research work 4	55
Doctoral seminar with presentation of the results of the research work and public defence	5
Total	60

The programme consists of organised forms of teaching and research. Organised teaching comprises of 60 credits; the remaining 180 credits are intended for individual research work for elaboration of the doctoral dissertation.

The Interdisciplinary Doctoral Programme in Environmental Protection is evaluated according to the European Credit Transfer System (ECTS).

The student selects courses from the lists of core and elective courses together with the supervisor and co-supervisor. The methodological course Interdisciplinary Scientific Research Work is compulsory for all students. Furthermore, the candidates choose two core and two elective courses. They can select 10 ECTS from elective courses from other doctoral programmes at the University of Ljubljana and comparable programmes of foreign universities. The selected courses must be approved by the supervisor and the co-supervisor.

COURSE PRESENTATION

Obligatory core courses

The methodological course Interdisciplinary Scientific Research Work is compulsory for all students. In this course, candidates will acquire the core principles and the basic methods and techniques for scientific and research work. Students will learn how to write good quality research articles. Doctoral seminars (10 ECTS) in the second and third year of study are obligatory for all students.

Course title	Lecturers	ECTS
Interdisciplinary Scientific Research Work	Katja Vintar Mally, Mihael J. Toman, Maja Kajin, Mitja Brilly, Matej Butala, Valentina Hlebec, Olga Markič, Matjaž Mikoš, Anja Podlesek, Gregor Skok	10

Core courses

	Course title	Lecturers	ECTS
1	ECOLOGY WITH NATURE CONSERVATION	Mihael Jožef Toman	10
2	ECONOMIC AND LAW OF ENVIRONMENTAL MANAGEMENT	Bogomir Kovač, Senko Pličanič	10
3	ENVIRONMENTAL CHEMISTRY AND TECHNOLOGY	Andreja Žgajnar Gotvajn	10
4	CRISIS MANAGEMENT	Vlado Dimovski	10
5	DISASTER MEDICINE	Radko Komadina	10
6	ENVIRONMENT, HEALTH, AND WELLBEING	Ivan Eržen	10
7	ENVIRONMENTAL AND SOCIOLOGICAL ASPECTS OF SUSTAINABLE DEVELOPMENT	Drago Kos, Katja Vintar Mally	10
8	SEISMOLOGY AND EARTHQUAKE ENGINEERING	Andrej Gosar	10
9	SOILS AND ENVIRONMENTAL GEOLOGY	Franc Lobnik	10
10	RISK MANAGEMENT	Sabina Huč	10
11	ENERGY AND NATURAL RESOURCE MANAGEMENT	Sašo Medved	10
12	AIR, WATER AND CLIMATE	Matjaž Mikoš	10

The primary goal of the core courses is for candidates to acquire and master the knowledge needed to produce a doctoral dissertation that has not yet been mastered at previous studies. Doctoral students will select two core courses with a total amount of 20 credits that have been approved by supervisor and co-supervisor.

Elective courses

	COURSE TITLE	Lecturers	ECTS
1	ENVIRONMENTAL ANALYTICAL CHEMISTRY	Marjan Veber	10
2	BIOGEOCHEMICAL CYCLES	Jadran Faganeli	10
3	BIOINDICATION AND CONSERVATION OF TERRESTRIAL ECOSYSTEMS	Klemen Eler	10
4	BIOMONITORING	Romana Marinšek Logar	10
5	PLANT ECOPHYSIOLOGY	Dominik Vodnik	10
6	EKOHYDROLOGY	Mitja Brilly	10
7	ECOLOGY OF SUBTERRANEAN HABITATS	Cene Fišer	10
8	MARINE ECOLOGICAL PROCESSES	Jadran Faganeli	10
9	ECOTOXICITY AND ENVIRONMENTAL RISK ASSESSMENT OF CHEMICALS	Anita Jemec Kokalj	10
10	THE ETHICS OF NATURE	Borut Ošljaj	10
11	PLANT PROTECTION PRODUCTS AND THEIR ALTERNATIVES	Stanislav Trdan	10
12	PHYSIOLOGY UNDER SPECIAL CONDITIONS	Uroš Kovačič	10
13	ENVIRONMENTAL GEOCHEMISTRY	Nina Zupančič	10
14	ENVIRONMENTAL GEOLOGY	Nina Zupančič	10
15	GEOLOGY OF LIVING ENVIRONMENT	Nina Zupančič	10
16	FUELS, COMBUSTION AND ENVIRONMENT	Andrej Senegačnik	10
17	WASTE MANAGEMENT	Andreja Žgajnar Gotvajn	10
18	FOREST AND ENVIRONMENT	Andrej Bončina	10
19	HYBRID MODELLING OF ENVIRONMENTAL SYSTEMS	Nataša Atanasova	10
20	INFORMATION APPROACHES IN SCIENCE AND TECHNOLOGY	Danica Dolničar	10
21	INDUSTRIAL ECOLOGY	Andreja Žgajnar Gotvajn	10
22	THE INTERDISCIPLINARY ASPECTS OF RURAL AREAS PROTECTION	Majda Černič Istenič	10
23	ENGINEERING MODELLING OF ECOLOGICAL PROCESSES IN SURFACE WATERS	Matjaž Četina	10
24	CHEMICAL PROCESSES IN THE ENVIRONMENT	Helena Prosen	10
25	METALS IN THE ENVIRONMENT	Marija Zupančič	10
26	KARST AND ENVIRONMENT	Mihael Brenčič	10
27	INTERNATIONAL ENVIRONMENTAL LAW	Vasilka Sancin	10
28	MICROBIAL ECOLOGY	David Stopar	10
29	MINERAL MATERIALS IN CULTURAL HERITAGE	Mirijam Vrabc	10

30	DESIGNING ENVIRONMENTALLY-FRIENDLY PRODUCTS AND TECHNOLOGIES	Borut Kosec	10
31	NATURAL HAZARDS IN MOUNTAINOUS ENVIRONMENT	Matjaž Mikoš	10
32	HAZARDOUS SUBSTANCES IN TEXTILES	Petra Eva Forte Tavčer	10
33	RENEWABLE ENERGY SOURCES	Sašo Medved	10
34	CONSERVATION FORESTRY	Jurij Diaci	10
35	ENVIRONMENT, BIOSECURITY AND ANIMAL PRODUCTION	Štefan Pintarič	10
36	ENVIRONMENTAL EPIDEMIOLOGY	Ivan Eržen	10
37	ENVIRONMENTAL POLICIES BETWEEN MORAL JUSTIFICATION, ECONOMIC ANALYSIS AND POLITICAL FEASIBILITY	Simon Hajdini	10
38	GROUND WATER	Mihael Brenčič	10
39	POLITICAL ECOLOGY	Andrej A. Lukšič	10
40	FIRES AND THEIR ENVIRONMENTAL IMPACTS	Stojan Petelin	10
41	ASSESSING ENVIRONMENTAL IMPACTS AND LANDSCAPE VULNERABILITY	Matej Ogrin	10
42	SPATIAL PLANNING AND ENVIRONMENT	Alma Zavodnik Lamovšek	10
43	RECYCLING OF METAL MATERIALS	Boštjan Markoli	10
44	SOIL REMEDIATION	Domen Leštan	10
45	ENVIRONMENTAL CHANGES AND PLANT	Alenka Gaberščik	10
46	TOXICOKINETICS OF MEDICINAL PRODUCTS FOR USE IN VETERINARY MEDICINE IN AN ANIMAL'S ORGANISM AND THE ENVIRONMENT	Tomaž Snoj	10
47	SUSTAINABLE DEVELOPMENT ORIENTED TECHNOLOGIES OF UNDERGROUND SPACE USED	Željko Vukelić	10
48	PLACEMENT RISKY BUILDINGS IN SOCIAL ENVIRONMENT	Marjan Hočevar	10
49	APPLICATION OF REMOTE SENSING	Krištof Oštir	10
50	SAFETY AND RELIABILITY IN PROCESS ENGINEERING	Borut Mavko	10
51	LANDSCAPE CONSERVATION	Mojca Golobič	10
52	PROTECTION OF WOODEN OBJECTS OF CULTURAL HERITAGE	Franc Pohleven	10
53	LAND EVALUATION AND MANAGEMENT	Franc Lobnik	10
54	PROTECTION OF HYDROSPHERE	Nataša Atanasova	10
55	HEALTH ECOLOGY	Marjan Bilban	10
56	COMBUSTION AND HEAT TRANSFER IN METALLURGICAL REACTORS	Borut Kosec	10
57	SCIENCE IN THE SOCIAL AND IN THE ENVIRONMENTAL CONTEXT	Olga Markič	10
58	INFECTIOUS ANIMAL DISEASES AND THE ENVIRONMENT	Peter Hostnik	10

Candidates are free to choose two elective courses from the list. One of the electives can be replaced by courses from other doctoral programmes at the University of Ljubljana and comparable programmes of foreign universities. The selected courses must be approved by the supervisor and co-supervisor. Elective courses can be selected also from the university pool of the generic skills courses, listed at the web site of the University of Ljubljana.

PROGRAMME COUNCIL

Organisation and implementation of the programme is co-ordinated by the Programme Council, consisting of one representative from each of the co-operating faculties and one student representative. Members of the Programme Council are proposed by the faculty senates and approved by the University Senate for a period of four years. The student representative is proposed by the Student Council of the University of Ljubljana and is appointed for a period of one year.

The Programme Council is chaired by the president and deputy presidents for course orientations. They are elected from and by the members of the Programme Council for a period of four years.

Programme Council members, representing the participating faculties:

Faculty of Law: Vasilka SANCIN, president
e-mail: Vasilka.Sancin@pf.uni-lj.si, phone: 01 420 31 29

Biotechnical Faculty: Mihael Jožef TOMAN
e-mail: Mihael.Toman@bf.uni-lj.si; phone: 01 320 33 40

School of Economics and Business: Andreja CIRMAN
e-mail: Andreja.Cirman@ef.uni-lj.si, phone: 01 589 27 55

Faculty of Social Science: Matjaž URŠIČ
e-mail: matjaz.ursic@fdv.uni-lj.si, phone: 01 580 53 49

Faculty of Civil and Geodetic Engineering: Nataša ATANASOVA
e-mail: natasa.atanasova@fgg.uni-lj.si, phone: 01 476 86 82

Faculty of Mathematics and Physics: Daniel SVENŠEK
e-mail: daniel.svenssek@fmf.uni-lj.si, phone: 01 476 66 31

Faculty of Maritime Studies and Transport: Oliver BAJT
e-mail: Oliver.Bajt@nib.si, phone: 05 671 29 10

Faculty of Mechanical Engineering: Ciril ARKAR
e-mail: ciril.arkar@fs.uni-lj.si; phone: 01 477 12 34

Faculty of Medicine: Andreja KUKEC

e-mail: andreja.kukec@mf.uni-lj.si; phone: 01 543 75 44

Faculty of Arts: Katja VINTAR MALLY

e-mail: katja.vintarmally@ff.uni-lj.si, phone: 01 241 10 05

Faculty of Natural Sciences and Engineering: Nina ZUPANČIČ

e-mail: Nina.Zupancic@ntf.uni-lj.si, phone: 01 241 12 42

Faculty of Chemistry and Chemical Technology: Andreja ŽGAJNAR GOTVAJN

e-mail: Andreja.Zgajnar@fkkt.uni-lj.si, phone: 01 479 85 79

Veterinary Faculty: Štefan PINTARIČ

e-mail: stefan.pintaric@vf.uni-lj.si, phone: 01 477 91 41

Additional information

Webpage: <http://www.uni-lj.si/studij/doktorski/varstvo-okolja/>

Administrative member: Faculty of Law

Student Affairs Office (PhD students)

Phone: 01 42 03 206, E-mail: referat.podiplomski@pf.uni-lj.si

Postgraduate studies offices at the providing faculties responsible for the implementation of the programme

Faculty	Contact	Phone	E-mail
Biotechnical Faculty	Vesna Ješe Janežič	01 320 30 27	vesna.jesejanezic@bf.uni-lj.si
School of Economics and Business	Petra Vranješ Sanja Đurašević	01 589 26 17 01 589 25 52	petra.vranjes@ef.uni-lj.si sanja.durasevic@ef.uni-lj.si
Faculty of Social Sciences	Anita Žagar	01 580 51 20	anita.zagar@fdv.uni-lj.si
Faculty of Civil and Geodetic Engineering	Monika Golobar	01 476 85 32	monika.golobar@fgg.uni-lj.si
Faculty of Chemistry and Chemical Technology	Maja Lamovšek	01 479 84 23	maja.lamovsek@fkkt.uni-lj.si
Faculty of Mathematics and Physics	Kristina Petrović	01 476 65 00	kristina.petrovic@fmf.uni-lj.si
Faculty of Maritime Studies and Transport	Pavla Magister	05 676 71 60	referat@fpp.uni-lj.si
Faculty of Mechanical Engineering	Tjaša Sterle Polak	01 477 11 69	fs.doktorski@fs.uni-lj.si
Faculty of Medicine	Katja Jeraj Stela Kužel	01 543 78 02 01 543 77 24	katja.jeraj@mf.uni-lj.si stela.kuzelj@mf.uni-lj.si
Faculty of Arts	Marjetka Gnidovec Doris Sattler	01 241 10 51 01 241 10 43	marjetka.gnidovec@ff.uni-lj.si doris.sattler@ff.uni-lj.si
Faculty of Natural Sciences and Engineering	Majda Štrakl	01 470 46 47	majda.strakl@ntf.uni-lj.si
Faculty of Law	Martina Tomšič	01 420 32 06	referat.podiplomski@pf.uni-lj.si
Veterinary Faculty	Biljana Grubišič	01 477 91 47	biljana.grubisic@vf.uni-lj.si