

## Portfolio for doctoral students

### Information on doctoral student:

- First and last name – **Alina Hrechko**;
- Structural unit (department, institute) - V.N. Karazin Kharkiv National University, Institute of Environmental Sciences, Department of environmental management and protected areas.
- Curriculum title  
103 “Earth Science”;



### General information on studies:

- Thesis title in English and in local language - Landscape-ecological bases of territorial organization of green-blue infrastructure of small towns (on the example of Chuguiv);  
Ландшафтно-екологічні основи територіальної організації зелено-блакитної інфраструктури малих міст (на прикладі м. Чугуїв);
- Supervisor(s)  
Doctor of Science (Geography), professor, head of Department of environmental management and protected areas **Nadiya Maksymenko**  
Doctor of Philosophy (Geography), Senior Researcher of Estonian University of Life Sciences **Anton Shkaruba**
- Curriculum, year of matriculation  
103 “Earth Sciences”, 1-t year of study
- Academic leaves

## INFORMATION ON ACADEMIC YEAR NO. 1 (OCT.2021-SEPT.2022)

### Status of research work:

- Overview of performed tests, collected data, field works, content and preliminary results of data processing  
The collection and systematic analysis of scientific sources of information on the research topic.
- 10 most important articles, book chapters etc, with short summary:

### Meetings with supervisors:

- October 1, 2021, Department of Environmental Monitoring and Preservation
- discussion of the dissertation topic, its relevance before presentation at the Academic Council;
- November 20, 2021, Department of Environmental Monitoring and Preservation
- discussion of the individual plan before presentation at the Academic Council

### Courses completed during academic year:

- Philosophy of Science & Science Methodology, 5 ECTS, V. N. Karazin Kharkiv National University;
- Natural Resource Science, 6 ECTS, V. N. Karazin Kharkiv National University;

- Foreign language for graduate students, 10 ECTS, V. N. Karazin Kharkiv National University;

#### **In-service training in foreign university/laboratory:**

- 13-27 September, 2021, Yaremche, Ukraine
- Conduct a study of green and blue infrastructure of small towns; to find common and distinctive features of the problems of green and blue infrastructure in 4 cities of Ukraine; propose solutions to improve the green and blue infrastructure of small towns;
- Results: A project to solve the problems of green and blue infrastructure of small cities was presented, 180 hours of lectures on green and blue infrastructure were listened to, 6 ECTS were received, as evidenced by the certificate.

#### **Performance at conferences:**

- Socio-ecological resilience across Eurasia – Innovation for sustainability transition, October 5-6, 2021;  
Sewage treatment plants in small towns of Ukraine.  
M. Martyniuk A. Hrechko O. Lenevych;
- XVII All-Ukrainian scientific Taliev readings, October 21, 2021;  
Possibilities of implementation of the green-blue infrastructure strategy for solving the drainage problem in small towns;  
poster presentation;
- XVII All-Ukrainian scientific Taliiv readings, October 21, 2021;  
Green and blue infrastructure of small towns (for example, Yaremche, Ukrainian Carpathians). M. Martyniuk A. Hrechko O. Lenevych  
poster presentation;

#### **Performance at doctoral seminars:**

- Name, time and place of event
- Title of presentation

#### **Performed teaching:**

- Philosophy of Science & Science Methodology  
Lecture:
  1. Science and various ways of cognitive development reality.
  2. Logic and methodology of science.
- Summer school in Yaremche  
Lecture:
  1. Increasing flood risk in Alpine region;
  2. Green infrastructure modelling: production process in plants;
  3. Basic concepts for peri-urban development;
  4. Reconciling cities with urban nature: towards the integration of ecosystem disservice in inclusive spatial planning;
  5. Are the roofs of existing buildings suitable for greening? Assessment of the prefabricate buildings potential to install green roofs in the context of UHI ;
  6. City sustainability in mountains context. A case of Ukraine Carpathians;



7. Green infrastructure and nature-based solution in Estonia;
  8. Raising biodiversity in urban green spaces;
  9. Sustainability urban drainage-systems;
  10. Disaster floods on the rivers of the Earth and Ukraine as a risk factor for sustainability development of mountains area;
  11. Soft and green measures to successfully restore surface water bodies for recreation purpose. A case of study from Vienna.
- Foreign language for graduate students seminars

### Supervision or co-supervision

- Name of the student,
- Level (BSc, MSc)
- Name of the curriculum
- Title on the thesis

### Participation on research projects:

- "Innovative approaches to soil exploitation in conditions urban landscape ",
- non-financing
- Maksymenko Nadiya

writing conclusions to work

### Articles published:

- Articles in Web of Science and/or Scopus-indexed journal:

1. Kucher A., Hrechko A. Assessment and analysis of regional features of resource-saving land use for sustainable management. *Scientific Papers: Series «Management, Economic Engineering in Agriculture and Rural Development»*. 2021. Vol. 21. Is. 1. Pp. 431–441.

- Articles in international publications

1. Hrechko A. A., Kochanov E. O. Use of international experience in waste management in Ukraine. Congress proceedings - IV International scientific congress society of ambient intelligence 2021 (student sections), Praha Oktan print, 2021. P. 307-309.

2. M. Martyniuk A. Hrechko O. Lenevych. Sewage treatment plants in small towns of Ukraine. Socio-ecological resilience across Eurasia – Innovation for sustainability transition (Tartu/online, October 5-6, 2021). p.19-21

- Articles in national publications

1. Hrechko A. A., Kochanov E. O. Expanding knowledge in waste management to implement positive experience of EU countries. *Academic and scientific challenges of diverse fields of knowledge in the 21st century. clil in action* : матеріали X Всеукраїнської наукової конференції з міжнародною участю (12 березня 2021 року). С. 242-248.

2. Гречко А. А., Мірошник Ю. В. Про проведення I міжнародної інтернет-конференції «Актуальні проблеми формальної і неформальної освіти з моніторингу довкілля та заповідної справи». *Людина та довкілля. Проблеми неоекології*. Т. 35, с. 151-153.

3. Гречко А. А. Неформальна екологічна освіта на території об'єктів ПЗФ. *Актуальні проблеми формальної і неформальної освіти з моніторингу довкілля та заповідної справи* : збірник тез доповідей I Міжнародної інтернет-конференції (м. Харків, 26 лютого 2021 року). Харків: Харківський національний університет імені В. Н. Каразіна, 2021. С. 59-60.



4. Леневиц О. І., Гречко А. А., Мартинюк М. О. Зелено-голуба інфраструктура малих міст (на прикладі м. Яремче, Українські Карпати). Охорона довкілля: зб. наук. статей XVII Всеукраїнських наукових Таліївських читань. Харків: ХНУ імені В. Н. Каразіна, 2021. С. 107 – 111.

5. Гречко А. А. Можливості впровадження стратегії зелено-блакитної інфраструктури для вирішення проблеми водовідведення в малих містах. Охорона довкілля: зб. наук. статей XVII Всеукраїнських наукових Таліївських читань. Харків: ХНУ імені В. Н. Каразіна, 2021. С. 29 – 30.

### **Public engagement and outreach**

- Publications aimed at a non-academic audience (such as popular science texts, newspaper features etc)
- Public lectures
- Media participation (such as interviews or comments)
- Blogs or social media accounts
- Work on advisory panels for social and cultural engagement;
- Industry or government or non-government organisation

### **Business and community**

- Patent
- Membership of public or government advisory or policy group or panels

### **Activity plan for the next academic year**

1. To analyze research methods, their synthesis and application in work
2. Carry out an inventory of the green infrastructure of the city of Chuguiv. Interpret the obtained data.
3. To develop a comprehensive model of surface runoff for the city of Chuguiv.
4. Preparation of scientific publications and presentations of research results.
5. To study on disciplines: Modern aspects of rational use of natural resources; Sustainable Development; Environmental Management Practices.

PhD student: **Alina Hrechko**  
PhD supervisor: **Nadiya Maksymenko**  
PhD supervisor: **Anton Shkaruba**