

Student Recruitment Notice for “Poland Visiting Program”

Tottori University will implement the "Poland visiting program" to foster internationally competent human resources in the field of environmental science.

With the cooperation of University of Warsaw in Poland, a lecture of “Habitat Studies” offered for students from various European countries will be delivered in the program. Participants will stay in an educational and research forest with newly established eco-friendly buildings, which is used in European educational programs. We are now recruiting students who are motivated by improvement of skill for field research and international experience.

1. Outline and objectives:

The course “Habitat Studies” offers the exploration of selected natural and semi-natural habitats developed in the postglacial landscape. Students learn about their genesis and differentiation, in the context of regional (e.g. climatic and geographical) and local (e.g. relief, water regime, soil, vegetation etc.) factors determining habitat features. This course is focused mainly on natural processes of soil development, involving interactions between abiotic and biotic factors in forest and non-forest habitats typical for the northern European postglacial landscape. Forest habitats are represented by a coniferous forest with pine domination, a forested bog, an oak-hornbeam forest, and an alder forest. Non-forest habitats are represented by post-agricultural landscape, comprising semi-natural meadows and small water bodies. The course provides a systemic view on functioning of the studied habitats, combining different aspects of soil science, plant ecology and ecosystem services that they provide.

During a series of field trips, students learn about the main environmental factors that shape both natural and semi-natural habitats typical for Masurian Lakeland. Additionally, students learn about physical, chemical and biological properties of the soil, including geobotanical and mycological aspects, and about processes of soil development. Students work in groups and perform group projects. To each group one habitat is assigned, and students perform there sampling of soil/sediment/water. The collected samples are used in laboratory analyses of the main chemical properties of soil, water and sediments. Students identify and describe major groups of soil organisms involved in decomposition and biogeochemical cycling of organic matter, i.e soil invertebrates (macro-, meso- and microfauna), and fungi (various taxonomical, ecological and functional groups, including mycorrhizal fungi). They also have the opportunity to explore key species and the ecosystem role of macrophytes and planktonic organisms living in small water bodies. Additionally, they analyze the pros and cons of the current management of studied habitats, and practices enhancing conservation. Finally, each group integrates all types of the obtained results for the studied habitats, interprets, and presents them during an oral presentation.

During the course, students will obtain the following knowledge and skills:

- a. to understand and critically evaluate the functioning of different habitats in post-glacial landscape;

- b. to recognize the main ecological factors affecting soil features and vegetation;
- c. to identify the complex relationships between different functional groups of organisms in natural and semi-natural habitats;
- d. to apply and evaluate modern techniques in the field of soil science and ecology.

The main goal of this course is to provide students with a systemic perspective on the studied habitats, and to enable them to identify and understand relations between different elements of the studied ecosystems (i.e. soils and sediments, water, vegetation, microorganisms and invertebrates). Moreover, students will learn methods of field and laboratory work commonly used in soil science, geobotany and ecology.

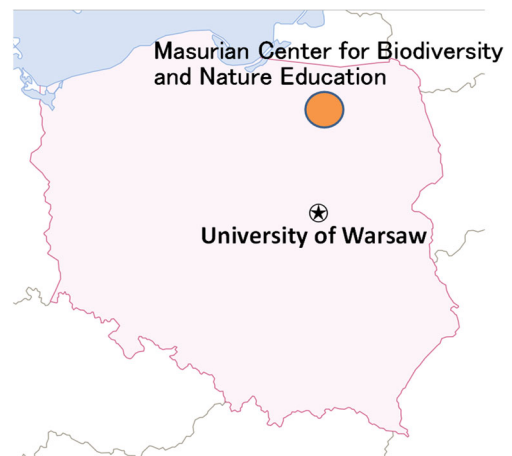
After finishing the program, the certificate will be presented from Faculty of Biology, University of Warsaw.



2. Place

Republic of Poland, Masurian Lakeland, the Masurian Center for Biodiversity and Nature Education in Urwitält

<http://mazury.biol.uw.edu.pl/english/>



3. Accompanying faculty member

Dr. Takao Ishikawa Ph.D. (University of Warsaw)

Dr. Takeshi Taniguchi Ph.D. (Tottori University)

4. Teachers of the Habitat Studies course

Professor Małgorzata Suska-Malawska (MSM)

– expertise in: biogeochemistry, soils science and ecosystem ecology

Professor Iwona Jasser (IJ)

– expertise in: hydrobiology and ecology of microorganisms

Dr. Monika Mętrak Ph.D. (MM)

– expertise in: biogeochemistry (organic matter composition and transformations) and ecosystem ecology

Dr. Mateusz Wilk Ph.D. (MW)

– expertise in: mycology and soil biology

5. Schedule

Fri. 1 September – Mon. 18 September 2023

※This may vary due to airline flight conditions, PCR testing before returning home and coordination with overseas partner organizations.

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| September 1 (Fri) | Departure from Tottori |
| September 2 (Sat) | Arrival in Warsaw, Stay in Warsaw |
| September 3 (Sun) | Move to The Masurian Center for Biodiversity and Nature Education in Urwitałt http://mazury.biol.uw.edu.pl/english/ Organizational meeting in the Center. |
| September 4 (Mon) | Introductory Day (the whole group works together) In the morning: 1. Geological history as an important factor shaping landscapes of the Masurian Lakeland – a lecture and a walk in the vicinity of the center (MSM). 2. Nature in the Masurian Lakeland – common vegetation types, typical plant and animal species – a lecture (MSM/MM). In the afternoon: 3. History and culture of the Masurian Lakeland - a lecture (MM) Optional: a short tour of The Masurian Center for Biodiversity and Nature Education In the evening: 4. Informal get-together event |
| September 5 (Tue) | Regular Day (the whole group works together) In the morning 1. Soils of the Masurian Lakeland and field methods in soil science – a lecture (MSM) 2. Mires and peatlands: genesis and characteristics – a lecture (MM) 3. A field trip to the coniferous forest and to the forested bog - soil profiles preparation and description, vegetation survey, soil sampling (MSM, MM, MW) In the afternoon: 4. Preparation of soil and sediment samples for the laboratory analyses (MM) |
| September 6 (Wed) | Regular Day (the whole group works together) |

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| | <p>In the morning</p> <ol style="list-style-type: none"> 1. A field trip to the oak-hornbeam forest and to the alder forest - soil profiles preparation and description, vegetation survey, soil sampling (MSM, MM) 2. Preparation of soil samples for the laboratory analyses (MSM) <p>In the afternoon:</p> <ol style="list-style-type: none"> 2. Practical classes on organic sediments (roughly 3 hours) (MM) |
| September 7 (Thu) | <p>Regular Day (work in subgroups)</p> <p>In the morning:</p> <ol style="list-style-type: none"> 1. Soil invertebrates – diversity, functions, and methods of investigation in function-oriented research – a lecture (MW) 2. Ecology of lakes and ecology, biodiversity and role of small water bodies in the agricultural and post-agricultural landscape – a lecture (IJ) 3. Sampling for soil invertebrates - a coniferous forest (group 1.) (MW) 4. Sampling water from small water bodies (group 2.) (IJ) <p>In the afternoon:</p> <ol style="list-style-type: none"> 5. Sampling for soil invertebrates – beech and oak forest and alder forest (group 2.) (MW) 6. Sampling water from small water bodies (group 1.) (IJ) 7. Setting of the Tulgren funnels (MW) |
| September 8 (Fri) | <p>Regular Day (work in subgroups)</p> <p>In the morning:</p> <ol style="list-style-type: none"> 1. Practical classes: Identification of soil invertebrates (group 1.) (MW) 2. Practical classes: identification of algae and macrophytes (group 2.) (IJ) <p>In the afternoon:</p> <ol style="list-style-type: none"> 5. Practical classes: Identification of soil invertebrates (group 2.) (MW) 6. Practical classes: identification of algae and macrophytes (group 1.) (IJ) |

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| September 9 (Sat) | <p>Regular Day (work in subgroups)</p> <p>In the morning:</p> <ol style="list-style-type: none"> 1. Practical classes: Chemical analyses of mineral soils (group 1.) (MSM) 2. Practical classes: Chemical analyses of waters from small water bodies (group 2.) (MM) <p>In the afternoon:</p> <ol style="list-style-type: none"> 5. Practical classes: Chemical analyses of mineral soils (group 2.) (MSM) 6. Practical classes: Chemical analyses of waters from small water bodies (group 1.) (MM) |
| September 10 (Sun) | <p>Regular Day (work in subgroups)</p> <p>In the morning:</p> <ol style="list-style-type: none"> 1. Practical classes: Chemical analyses of mineral soils (group 1.) (MSM) 2. Practical classes: Chemical analyses of waters from small water bodies (group 2.) (MM) <p>In the afternoon:</p> <ol style="list-style-type: none"> 5. Practical classes: Chemical analyses of mineral soils (group 2.) (MSM) 6. Practical classes: Chemical analyses of waters from small water bodies (group 1.) (MM) |
| September 11 (Mon) | <p>Regular Day</p> <p>In the morning (the whole group works together):</p> <ol style="list-style-type: none"> 1. Fungi – diversity, functions, and methods of investigation in a function-oriented research a lecture (MW) 2. Field and laboratory methods of mycological research – a short trip and practical classes (MW) <p>In the afternoon (work in subgroups):</p> <ol style="list-style-type: none"> 3. Data processing in subgroups according to the assigned habitats (MSM, MM, MW, IJ) |
| September 12 (Tue) | <p>Regular Day</p> |

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| | <p>In the morning (the whole group works together): 1. Water conservation in your landscape – workshops (MM)</p> <p>In the afternoon (work in subgroups): Data processing in subgroups according to the assigned habitats (MSM, MM, MW, IJ)</p> |
| September 13 (Wed) | <p>Summarizing Day (work in subgroups)</p> <p>In the morning and in the afternoon: Preparation of final presentations in subgroups according to the assigned habitats (MSM, MM, MW, IJ)</p> |
| September 14 (Thu) | <p>Presentation day (the whole group works together)</p> <p>In the morning: Final presentation delivery</p> <p>In the afternoon: Time for packing and cleaning</p> |
| September 15 (Fri) | Move to Warsaw |
| September 16 (Sat) | Departure from Warsaw, Poland |
| September 17 (Sun) | Arrival in Narita |
| September 18 (Mon) | Arrival in Tottori |

Important notes

During the course, we will spend lots of time outdoors, regardless of the weather. Hence, we strongly recommend to take with you:

- ✓ students ID,
- ✓ waterproof outfit (jacket, boots, possibly trousers),
- ✓ an insect repellent,
- ✓ creams with UV filters,
- ✓ basic medicines against colds, allergies,
- ✓ a vacuum bottle.

For work on presentations, laptops will be necessary.

- ✘ There could be some change of activities depending on the arrangements of hosting institution and prevailing weather conditions.
- ✘ In addition to the overseas program shown above, there will be about an hour of pre-study and post-study class meetings.

6. Course fees (under consideration)

Maximum 100,000 JPY

7. Number of positions:

Maximum of 8 students

※ Applicants will be selected on the basis of the application documents submitted and interview.

8. Qualifications:

Applicants must

- (1) be student of Department of Dryland Science or Department of Agricultural Science in the Graduate School of Sustainability Science at the time of application;
- (2) be in good health and motivated both mentally and physically;
- (3) be approved to travel overseas by his/her supervisor and parents etc.;
- (4) be a certain level of English proficiency;
- (5) be already taken "Overseas Safety Management" or "Overseas Safety Seminar (E-Learning)" offered by Tottori University.

* Those who have not yet attended the seminar must attend "Overseas Safety Seminar (E-Learning)" before the trip.

9. Application period and method:

Recruitment period: From Wednesday, June 14th, 2023 to Wednesday, June 28, 2023

Method: Submit following documents to the places of submission.

Application documents: (1) Application form (see attached)
(2) Copy of passport
(3) Valid proof of English proficiency (TOEIC or TOEFL score reports, EIKEN test results etc.)

* Submission is desired, but not necessary.

(4) Proof of vaccination for Covid-19 (*Vaccination record or vaccination certificate, etc.)

* Submission is desired, but not necessary.

10. Schedule for the application and screening:

Recruitment period: From Wednesday, June 14th, 2023 to Wednesday, June 28, 2023

Interview date: Friday, June 30, 2023

*Interviews will be conducted for all applicants. If you are unable to make the scheduled interview date, please let us know in advance.

*Information on the interview location and time will be provided through your supervisor.

Screening method: Result of application document and interview will be taken into

Result notice

account.

Monday, 3 July 2023

11. Decision on whether or not to carry out the trip

Please note that due to the spread of the Covid-19 and other unforeseen circumstances, a decision may have to be made to cancel the implementation of this overseas trip.

■ Place to submit application documents

Administration office of International Platform for Dryland Research and Education (located inside of ALRC).

1390 Hamasaka, Tottori, 680-0001 Japan

Email : ipd-zim@ml.adm.tottori-u.ac.jp

■ Place of Inquiry

Takeshi TANIGUCHI, Accosiate Professor,

Arid Land Research Center, Tottori University

Tel. 0857-21-7038

Email: takeshi@tottori-u.ac.jp

2023 年度 持続性社会創生科学研究科博士前期課程
「ポーランド派遣プログラム」申請書
FY 2023 Graduate School of Sustainability Science, Master's program
Application for "Poland visiting program"

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| 所属 : Affiliation: | |
| 氏名(押印又は自筆) : Name (One's own writing or affix seal): | ※パスポートと同様の氏名を記載 (as shown on passport) |
| 国籍 : Nationality: | |
| 生年月日 : Date of birth: | |
| 健康状態 : Health status: | |
| 新型コロナワクチン接種回数 : Number of vaccinations against COVID-19: | |
| 応募動機 : Reason for application: | |

指導教員確認欄 Supervisor's confirmation

上記のとおり応募することを確認しました。

I hereby give my consent for above stated student to apply for the "Short Visit Program to Poland".

日付

氏名

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Date

Name

Seal