

## Division of Environmental Science Development Guidance for first-year students 2021

Basic Principles, Lecture, Practice, Lab, Credit, etc.

### 1. Basic Principles

Division of Environmental Science Development has the main objective to establish a new research system of "Environmental Science". We are aiming to materialize new science with "Be Ambitious! (W.S. Clark)" spirit. In order to face unprecedented global environmental issues, we must explore education and research beyond current conventional states, of course. The division possesses new and novel holistic education and research systems for solving the existing environmental problems only by integrating diverse disciplinary approaches. Our curriculum provides wide varieties of background knowledge on the environment and fosters deep professional knowledge and a sharp intuition for carrying out such integrated research projects.

### 2. Courses and supervisors

#### 2.1 Courses

Division offers four courses: Human and Ecological Systems, Environmental Adaptation Science, Practical Science for Environment and Global Environmental Management.

**Course in Human and Ecological Systems:** The course studies rehabilitation and control of human-ecological systems with diverse structures.

**Course in Environmental Adaptation Science:** The course studies total remediation technology and evaluation methods for environmental impacts of chemical substances.

**Course in Practical Science for Environment:** This course offers training program with practical approaches involving off-campus activities and local society, organizations and businesses such as Proposal-Based Internship.

**Course in Global Environmental Management:** The course offers practical training programs for international environmental issues. Themes are an international corporation, a technique for field observation and research, resource management, and environmental education and training.

#### 2.2 Supervisors

Students have a chance for selecting research themes and supervisors twice after their entrance. Students who have their themes and supervisors at the time of their entrance can register their supervisors at Kyomu (Academic Affairs Office) in April. On the other hand, students, who wish to learn general and wide subjects before selecting their themes and supervisors, could make their decision by July (to be announced exact date later). Therefore, it is highly recommended to visit many faculty members to discuss research themes. Because there is a limitation of the number of

students to supervise for each faculty, there may be a possibility for students not to choose their preferred faculty as their supervisors. We are making our best effort through counseling and consultation. In fact, there has been no case reported that students could not be supervised by their preferred faculty in the past.

**Remarks:**

1. Students, who have supervisors at the time of their entrance, must report to Kyomu (Academic Affairs Office) in April. If a student has not decided who a supervisor is, report a course head as a tentative supervisor to Kyomu (Academic Affairs Office).
2. Students can change their course and supervisor after consultation with Educational Affair Committees if an expected supervisor agrees.

**2.3 Co-supervisors**

You have a co-supervisor who supports your supervisor, and two supervisors instruct you. If you choose your co-supervisor belonging to the other graduate school, one additional co-supervisor in our division will be assigned.

**3. Credits**

Thirty units of credits are required for the Master’s course completion.

The breakdown is as follows.

Research in environmental science development for Master’s thesis	8 credits
Seminar in environmental science development I	4 credits
Lectures, methods, laboratory works, etc.	18 credits
Total	30 credits

- Research in environmental science development I: two year-work in research.
- Seminar in environmental science development I: two year-attendance of suggested course seminars and presentation of research studies.
- Must read "Registration of Course Subjects" and sign up the lectures, method, laboratory works, etc. **during the registration period from April 5th to 15th at 5 pm.**
- Both Research in environmental science development I and Seminar in environmental science development I are automatically registered, so you do not need to register these two.
- Registration Method

Go to ELMS Portal <https://portal.eis.hokudai.ac.jp/portal/contents/home>, log in by ELMS ID & password (distribution method of ELMS ID & Password will be notified later) and start register.

The Registration page is indicated by ‘Academic Registration System’ (Left-side box). After clicking the button, you will see ‘Web 履修登録システム (Web Registration System)’. Then, click it. After you will go to the next page, you can change the language

into English. Input your contact information (phone number and e-mail address) and save the information. Then, you can register your lectures and practical courses.

For information, you can download 'ELMS Portal Users Manual for Students (PDF)'. After log in, click the button of 'Users Manual' at the right top corner. Then, you can download the manual.

Please check the ELMS top page during the registration period to register. You can check the details of lectures etc. at 'Syllabus Search' <https://www.global.hokudai.ac.jp/students/syllabus-search/>. Please refer to the student guidebook for further information regarding lectures, methods, lab. works, etc. especially for other divisions.

#### 4. Lectures, Methods and Laboratory Works

- Attend the seminar; Introduction to Environmental Science.
- Attend the classes in other divisions as well as other faculties, if necessary.

##### 4.1 Methods and Laboratory Works

Methods and Laboratory Works (4 credits) are offered under either periodical schedule or concentrated period such as field training. Please refer carefully our syllabus or consult a faculty offering the program. The syllabus can be found in <http://syllabus01.academic.hokudai.ac.jp/Syllabi/Public/Syllabus/SylSearch.aspx>. The contents and schedules are posted on the notice board or sent by e-mail. Please check them frequently.

##### 4.2 Seminars

(**Compulsory**, 4 credits, 2 years) Take seminars in your course or others. You must attend at least 60 class works (90 min for each class work). Seminar information and schedules are on the website;

<http://www.ees.hokudai.ac.jp/division/kigaku/>

##### 4.3 Fundamental Course in Environmental Science Research

To start an academic life, students should learn common sense for a researcher. Our graduate school provides a short and systematic review of research ethics, fundamentals of research, presentation skills, social survey and statistics as "Fundamental Course in Environmental Science Research" (Common subject of Graduate School of Environmental Science). Each of the four modules below consists of three or four of 90 min class. You can get one credit by completing two modules. It is provided in English for a fall term and similar contents will be provided as "Methods of Environmental Science Development" in Japanese for a spring term. You can earn credit from only one of either the English version or the Japanese version. (Contact to Dr. Okino)

The followings are the schedule of the English version.

1. Fundamentals of research (April 12, 19, 26, May 10); research work in graduate

schools, design of research plan, structure of papers, evidence-based discussions, respect for originality

2. Academic skills (May 17, 24, 31, June 7); Slide presentation, Poster presentation, Literature search

3. Social survey (April 9, 16, 23, 30): methods of interview and questionnaire with sampling

from population to confirm research hypothesis

4. Statistics; Statistical testing of hypotheses (May 7, 14, 21, 28), Descriptive and inferential statistics, Group comparisons and correlation analysis

## **5. Master's Thesis**

Master's Thesis has to be submitted based on two-year study and research.

Thesis subject has to be selected by yourself by receiving consultation from your (co-)supervisors, and materials and literature offered by them. In your first year, you have to give a mid-term progress report by a poster presentation. In the second year, mid-term oral presentation, another poster presentation and final oral presentation (examination) must be done.

Criteria of thesis evaluation are as follows.

- 1) Mastery of fundamental knowledge in the field.
- 2) Ability to access and integrate information into a cohesive overview of current knowledge  
Ability to critically evaluate the meaning, value, and contribution of published literature in the field
- 3) Imagination and originality of thought
- 4) Ability to draw reasoned conclusions from a body of knowledge
- 5) Clear and well interpretable graphs and figures
- 6) Correct quotation of the scientific literature

## **6. Internship**

A long-term internship will be offered to students in our division. This is not a short term (1–2 weeks) common internship such as so-called "job training type". Local and national governments, organizations, research institutions, companies, NPOs, or international institutions with environmentally related projects are available for 2–6 month internship. Please contact a member of the internship committee (Yamanaka) after consulting with your supervisor, before starting your internship, because the committee should contact the institution you go. Four credits can be obtained after the completion of such internship as course credits for Internship in Practical Science for Environment I, II.

## **7. Teaching License**

By earning the credits of appointed lectures, methods, and laboratory works, students can receive their teaching license in Science. Refer to the Students Handbook.

## 8. E-mail Address and Cybersecurity

### 8.1 E-mail address

HINES local network is available for the University community. In order to use it, it is required to obtain "ees.hokudai.ac.jp" domain. With HINES e-mail address, you can access various online services offered by Information Initiative Center (IIC). A cyber ID called ELMS-ID will be distributed to each student within several days from the enrollment. Using your ELMS-ID, you should immediately apply your own e-mail address by accessing iic portal site: <https://igate.hucc.hokudai.ac.jp/index.html>. You must pay your great care for selecting the name of your e-mail address since your HINES e-mail address will be used for your research activities. **Your e-mail address needs to be reported to the division administrator (esd-jimu@ees.hokudai.ac.jp or room E-205) in order to register it in our division mailing list.** The registered e-mail shall be used **ONLY for our division business.** You must check your HINES e-mail frequently since there will be many important announcements to be sent via e-mail. We also use your e-mail to check your safety at natural disasters or other extreme events.

You can use your e-mail on Web-mail site (<http://wmail.hines.hokudai.ac.jp>) or other e-mail service providers such as Gmail, mobile telephone, etc. We **DO NOT** recommend mobile telephone mail service since there have been many troubles on transferring e-mails with attached files. Troubles on transferring e-mails are at your own risk. If you want to use mail software on your PC for accessing HINES e-mail, please refer directions at <http://www.hines.hokudai.ac.jp/hines-mail/config.html>

You can also use Microsoft Office free during your enrollment period. If you want to download the software, please contact your supervisor.

### 8.2 Cybersecurity

If your computer is infected with a computer virus, there is a risk that negative influences spread widely via computer networks. Once infected, you also may face very serious situations, such as losing your research results. For this reason, the university strongly recommends anti-virus software to be installed in all computers connected to the university network.

To install the anti-virus software, log in to the educational information system (ELMS; <https://portal.eis.hokudai.ac.jp/>) with your ELMS-ID, and download the installation file of the anti-virus software provided by the TrendMicro Inc. After you log-in, click "**Application for use of the university-provided software**" link and select "**TrendMicro ライセンス**". To agree to the terms of use, check the box below and click the "同意します" button. Then, register your e-mail address, MAC-address of your PC, and

etc. to proceed to the download window. Since the installation guide is only available in the Japanese language, please contact your colleagues or staffs in case you face difficulty.

## 9. Approximate Schedule for Master Course (April Entrants)

### First Year

April	Guidance for freshmen Semester begins Counseling Supervisor selection (1st chance)
April-June	Mid-term presentation of Master Thesis (Attend as observers)
June	Barbeque party ( <i>Jinpa</i> in short Japanese)
July	Supervisor selection (2nd chance)
July	Master's Thesis Defense (Attend as observers)
November	Mid-term presentation of Master Thesis (Poster presentation) and you should have a co-supervisor by this period
February	Master's Thesis Defense (Attend as observers)

### Second Year

April-June	Mid-term presentation of Master Thesis (Oral presentation)
June	Barbeque party
November	Mid-term presentation of Master's Thesis (Poster presentation)
February	Master's Thesis Defense (Oral presentation)

## 10. Doctoral Course

12 units of credits are required for the Doctoral course completion.

Research in Environmental Science Development for Doctoral Thesis II	8 Credits
Seminar in Environmental Science Development II	4 Credits
Total	12 Credits

- Research in Environmental Science Development for Doctoral Thesis II (3 years) is to research on a subject of the division for the doctoral thesis.
- Seminar in Environmental Science Development II (3 years) is to attend to the division seminar to obtain a wide knowledge, and to read many reports related to the theme of a doctoral thesis and to present the summary.
- Present progress at Mid-term presentation, Division or related Seminar. Receive a consultation from Education Affair Committees or at Kyomu (Academic Affairs Office) for detailed information.
- Both Research in Environmental Science Development for Doctoral Thesis II and Seminar in Environmental Science Development II are automatically registered, so

you do not need to register these two. However, if you want to earn credits of lectures and practical courses for Master's students, you need to register them by yourself during the registration period.

## Doctoral dissertation review process and requirements

### A. Minimum requirements for doctoral course

A minimum of one peer-review research paper published (in English) as first author.

One peer-review paper in Japanese along with the thesis dissertation in English is acceptable conditioned to approval by faculty meeting before the application.

### B. Minimum requirements for doctoral course in case of application within one year after the end of the doctoral course study.

A minimum of one peer-review research paper (in English) as first author accepted before the pre-defense.

One paper in Japanese along with the thesis dissertation in English is acceptable conditioned to approval by faculty meeting before the application.

### C. Dissertation defense procedure

1. The pre-defense is conducted four months before the expected graduation.
2. Application documents should be submitted to pre-defense reviewers a week before the examination date. The documents include the dissertation draft, reference paper(s), dissertation bibliography, curriculum vitae, list of research accomplishments, dissertation abstract. At this point, at least one reference first-author paper should be accepted. In a case of doctoral course, a paper in review is acceptable if its current status is in minor revisions.
3. The pre-defense consists of a 40–50-min presentation followed by a 30–40-min question and answer session.
4. The final defense can be held after acceptance of the application at a board meeting of representatives.
5. The final defense consists of an approximately 40-min presentation followed by a 30-min question and answer session.
6. The final-defense result should be submitted to the academic affairs office within one year after the acceptance at the board meeting of representatives.

## 11. Relationship between Graduate School of Environmental Science and Faculty of

## **Environmental Earth Science**

Students belong to Graduate School of Environmental Science, which is an education organization, while professors belong to different research organizations such as Faculty of Environmental Earth Science, Institute of Low Temperature Science, and Arctic Research Center. Therefore, please be careful not to use the name of Faculty of Environmental Earth Science for your affiliation. Once again, you belong to Graduate School of Environmental Science.

## **12. Educational affairs (Counseling) Committees**

Students can seek academic advice from the educational affairs the committee members or counseling committee members, besides their supervisors.

### **Head of Division**

Teiji Watanabe      A302    TEL:706-2213      twata@ees

### **Educational Committees**

Shinichiro Noro      B-702    TEL:706-2272      noro@ees      (Chief)

Tomonori Sato      B-304    TEL:706-2288      t\_sato@ees

Shiro Tsuyuzaki      A-805    TEL:706-2283      tsuyu@ees

JorgeGarciaMolinos Arctic Research Center 211      TEL:716-9628      jorgegmolinos@arc.

### **Division Office Administrator**

Yuko Ito      E-205    TEL: 706-2224      esd-jimu@ees

\* Please add “.hokudai.ac.jp” to e-mail address above.

## **13. Insurances**

Hokkaido University advises all students to subscribe to Personal Accident Insurance for Students Pursuing Education and Research (学研災/*Gakkensai*). You received its brochure with documents for the enrollment procedure. You can find useful information about “Insurance for students” in “Safety Manual”.

In addition, Graduate School of Environmental Science advises field scientists to subscribe the insurance to cover rescue expenses. Each laboratory will collect insurance premium if applicable. Ask your supervisor if you need it.

## **14. Field Research Planning Record**

You are asked to submit ‘Field Research Planning Record’ through your supervisor when you conduct field survey (by e-mail attachment to Division Office Administrator and Division Head by 3 days prior to departure date). This enables to respond to emergency immediately.

## 15. Scholarship

Information about scholarship is delivered through our mailing list. In addition the information is shown at our website.

<https://www.ees.hokudai.ac.jp/modules/top/students/index.html>

## 16. Course Guidance & Start date of Course seminar

### Course in Human and Ecological Systems:

- **Nature in Symbiosis Seminar:** (Contact: J. Negishi; negishi@ees)  
Guidance & Seminar: (Starting date) Wednesday, April 14<sup>th</sup>,  
(Time) 14:45, (Place) D103
- **Environmental Geography Seminar:** (Contact: T. Watanabe; twata@ees)  
Guidance & Seminar: (Starting date) Wednesday, April 14<sup>th</sup>,  
(Time) 14:45, (Place) D101
- **Interdisciplinary Seminar:** (Contact: M. Fujii; mfujii@ees)  
Guidance & Seminar: (Starting date) Friday, April 9<sup>th</sup>  
(Time) 13:00, (Place) D101

### Course in Environmental Adaptation Science: (Contact: S. Noro; noro@ees)

Guidance & Seminar: (Starting date) Monday, April 12<sup>th</sup>,  
(Time) 16:30, (Place) D101

### Course in Practical Science for Environment: (Contact: Y. Yamanaka; galapen@ees)

Guidance & Seminar: (Starting date) Tuesday, April 13<sup>th</sup>,  
(Time) 13:00, (Place) C204-2

### Course in Global Environmental Management: (Contact: T. Okino; okino@ees)

Guidance & Seminar: (Starting date) Tuesday, April 13<sup>th</sup>,  
(Time) 16:30, (Place) D101

\* Please add “.hokudai.ac.jp” to e-mail address above.