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GP-RSS

International Joint Graduate Program in Resilience and Safety Studies

災害科学・安全学国際共同大学院

Prospective Students Information Session

International Joint Graduate Program in Resilience and Safety Studies

Who are we?

- The **GP-RSS** is a Ph.D. program sponsored by  文部科学省 MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN with a focus on **international education** in Disaster Sciences at Tohoku University.
- We are unique in our efforts to provide a **transdisciplinary** research platform for international collaboration.





Research and Education Objectives on Resilience and Safety

What do we seek?

We encourage **collaboration**, both at an academic discipline level, and at an international level of research.

Our program encompasses a broad range of research in socio-environmental adaptations that build on foundations of disaster science and human security.

We care about **transdisciplinary perspectives** that promote **societal resilience**.



GP-RSS Program Design

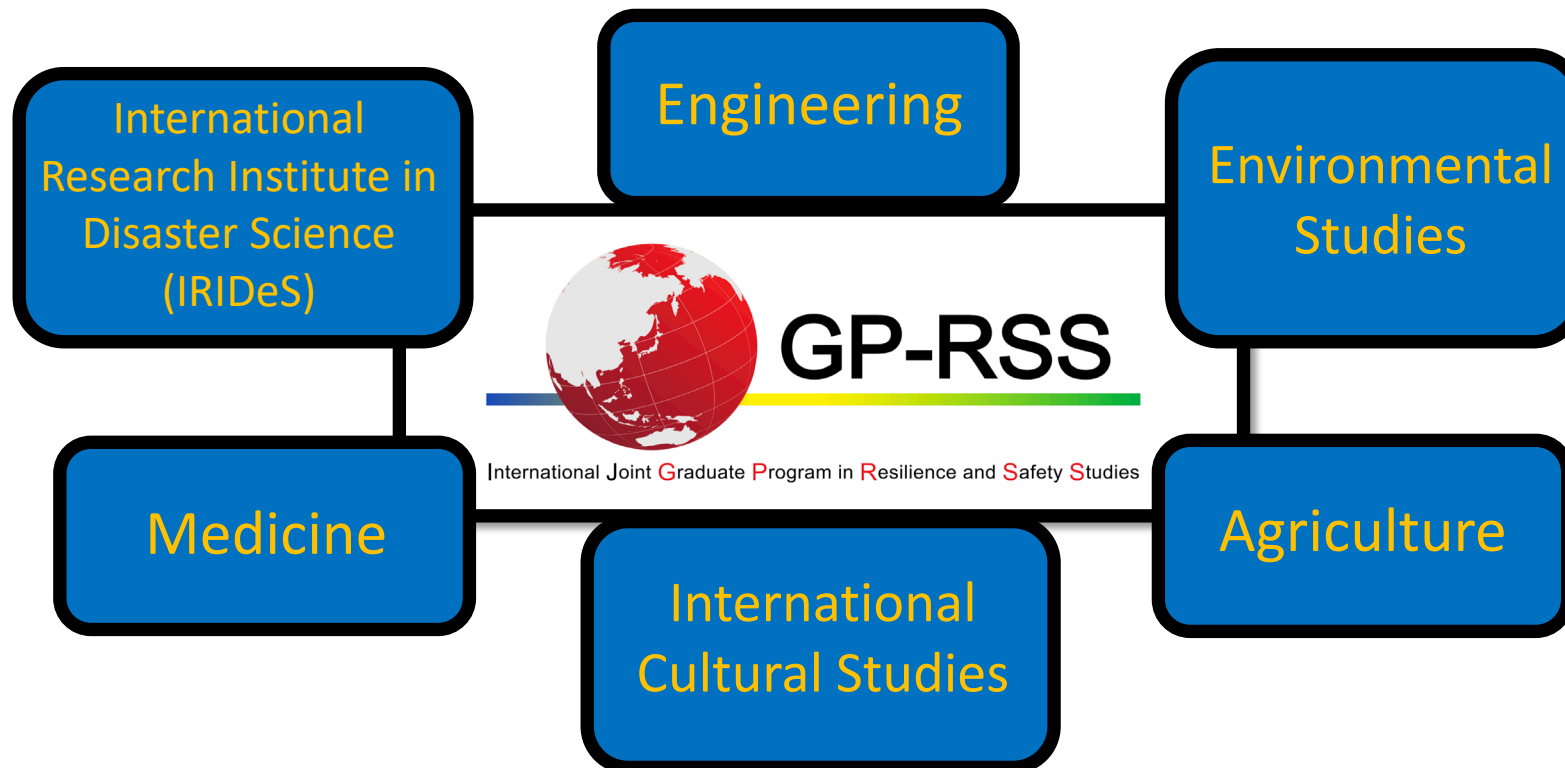
Offering various types of research invitations, exchanges, and joint collaborations



GP-RSS Admissions: Who can apply? ①

<http://gp-rss.tohoku.ac.jp/recruitment.html>

- Masters students from our six constituent graduate schools who have been accepted as a Tohoku University graduate student.



✂ Students with supervisors from IRIDeS faculty are eligible



GP-RSS Admissions: Who can apply?②

<http://gp-rss.tohoku.ac.jp/recruitment.html>

- Students with a **STRONG** recommendation from their Ph.D. supervisor, who intend to apply to the **JSPS Doctoral Research Fellowship DC1 or DC2** (日本学術振興会特別研究員 DC1/DC2)
- The GP-RSS application format is based on the JSPS DC1/DC2 application
- The International Joint Graduate Program of the Tohoku University Advanced Graduate School promotes the JSPS Doctoral Research Fellowship

For further information, please visit:

<http://gp-rss.tohoku.ac.jp/>



GP-RSS Admissions: Who can apply?③

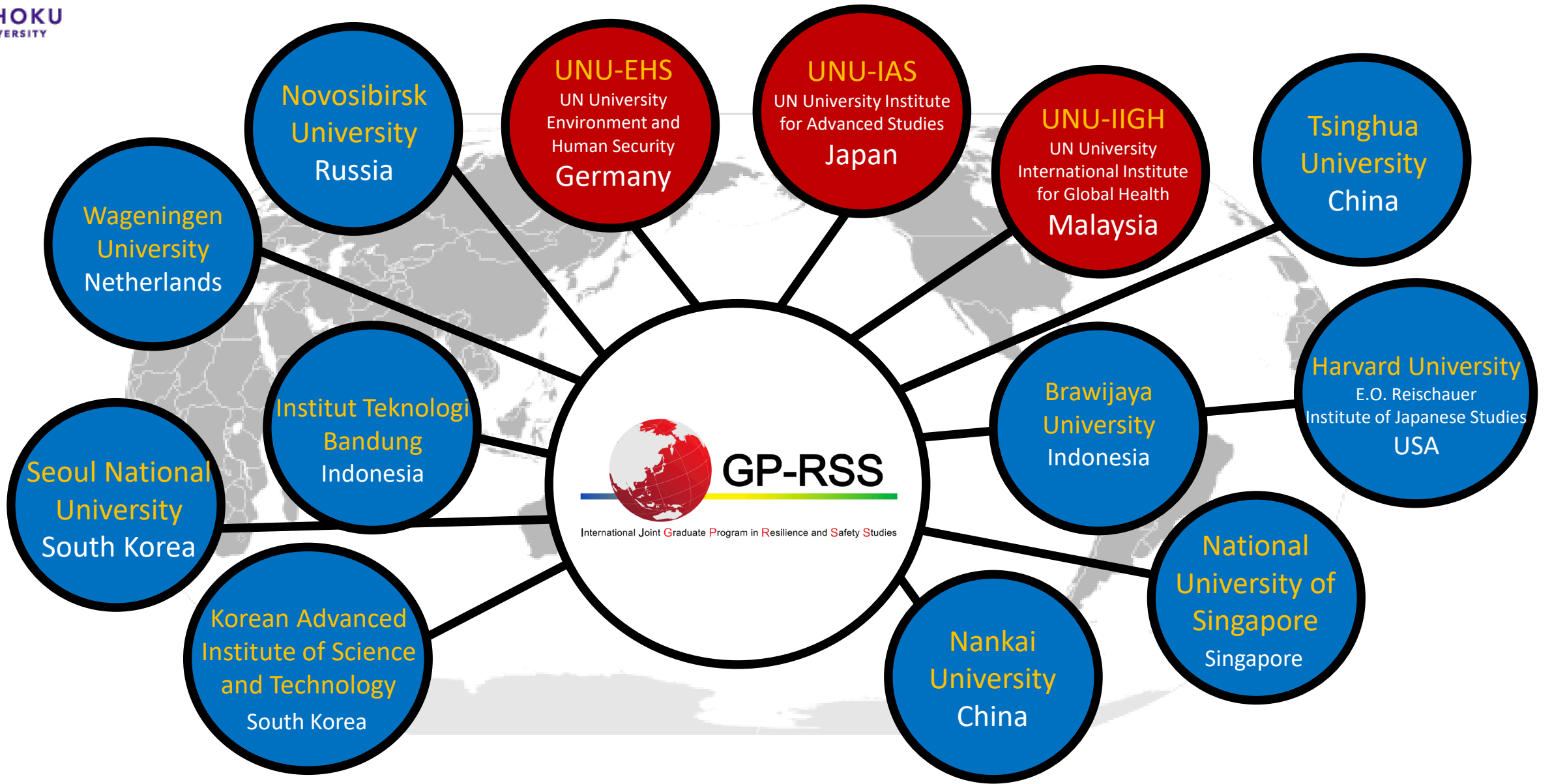
<http://gp-rss.tohoku.ac.jp/recruitment.html>

- Students intending to **collaborate internationally** throughout their Ph.D.
 - An unique feature of our Ph.D. curriculum is a **six month doctoral research residency** with an overseas affiliate. We select our students based on their abilities to plan and deliver on international research collaboration. We recommend that you **discuss with your Ph.D. supervisor** prior to application whether this is a good course of action for your Ph.D. project.
 - GP-RSS students are required to undergo rigorous **Qualification Examinations** to ensure that they are on-track in their Ph.D. We do not offer extended funding to students who extend their Ph.D.s.



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GP-RSS Network of International Collaboration



GP-RSS Research Areas

An excerpt of ongoing research projects within the GP-RSS

Post-Disaster Resilience

- Post-disaster epidemiology (WHO / UN)
- Cluster approaches to large-scale disaster medical care
- Modeling mechanisms of woody debris export
- Post-disaster and disaster-preventative solid waste management
- Comparative resilience curves between developed and developing nations

Efforts Toward Achieving SDGs

- Developing disinfection infrastructures to combat microbial pathogens in water systems
- Theoretical models on implementation and achievement paths toward SDGs
- Policy implications on gender inequality issues in developing nations
- Reception and integration assessments of migrants and refugees

Assessing threats to Global Security

- Cost-benefit / time-series analyses on human security risk events
- Expedient and long-term assessment of food safety risks

Prediction of Natural and Anthropological Disasters

- Comparative modeling of disaster relief efforts between developed and developing nations
- Mapping and characterization of urban flood areas

Technological Innovation Toward Resilience

- Mitigating hazards by using machine-learning for metadata identification of Tsunami deposits
- Metadata and API development for disaster event mass-archives

Ph.D. Topics of Our Students

An excerpt of ongoing research projects within the GP-RSS

Medicine

- Development and implementation of vaccines for respiratory viruses
- Investigating genetic and epidemiological mechanisms underlying infectious diseases
- Building public health prediction models
- Machine learning predictions of postpartum depression

Social Sciences and Education

- Diversifying food delivery systems through insurance of food and agricultural safety
- Re-examining conventional practices that effect local and global import/export policies
- Introducing comparative international education policy-making models to remedy current lack of SDG understanding in Japanese environmental education

Environmental Engineering

- Improvement of waste management and recycling practices in mining
- Life Cycle Assessments and informed policy-making
- Adaptive urban planning in predicted areas of disaster
- Socio-economic assessments of green remediation
- Development of low-carbon resource management

Biological Sciences

- Development of bacteriophages found in organically farmed rice to combat pesticide-resistant strains of bacteria that instigate mass infection events
- Investigating causal mechanisms of mastitis in agricultural bovine and development of antibiotic-independent countermeasures to ensure safety of dairy

Opportunities with The GP-RSS

Summer Schools and Workshops with
invitational lectures by our program affiliates



Intensive core subjects that showcase cutting edge research
in broad topics of societal resilience



Electives taught by faculty at Tohoku University
who dedicate their research to disasters, safety,
and resilience



Guest lectures and talks by leading researchers from around the world

Make international collaboration a part of your Ph.D.
– connect with likeminded students at Tohoku University

GP-RSS Educational Objectives

Basic knowledge and application skills
in Disaster and Safety Sciences

災害科学・安全学分野における基礎基盤知識と応用する能力

**A deep understanding of
their study discipline**

Multidimensional perspectives of
Disaster, Resilience, and Safety Sciences

災害科学・安全学分野における既存の枠組みを踏まえつつ、
幅広い視野から多角的に捉える能力

**Multi-disciplinary
perspectives**

Interactive and cooperative attitudes
toward Disaster and Safety Sciences
based in problem-based learning

災害科学・安全学分野において対話型協働能力の習得と
実践課題解決の能力

**Trans-disciplinary
implementation**

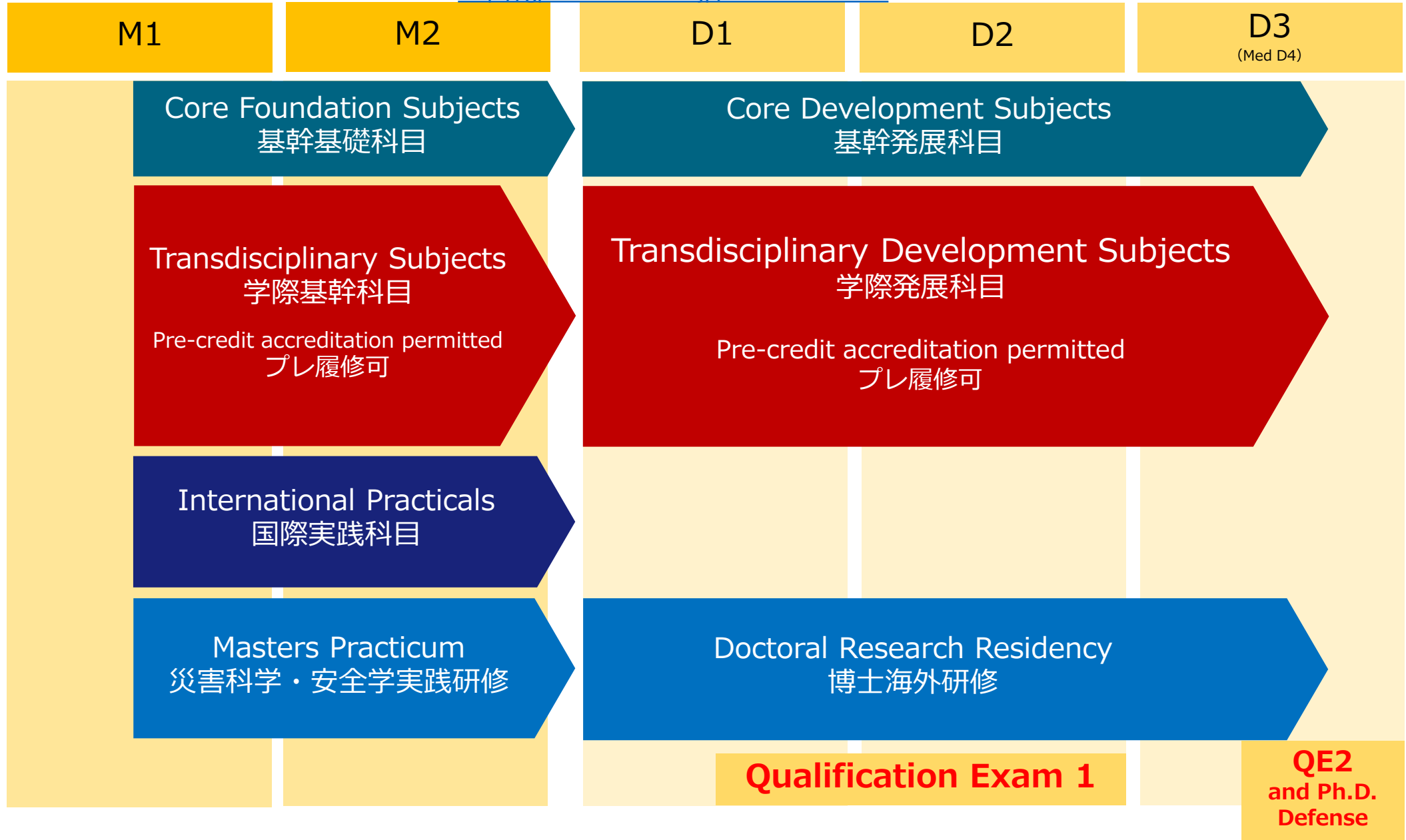
Building upon hands-on international
research experience and developing
global communication skills

国際的視座と現地密着滞在型の研究交流経験を有し、その知見に
立脚しながら研究成果を発信し、国際的に活躍できる能力

**Internationally-minded
research performance**

GP-RSS Curriculum

<http://gp-rss.tohoku.ac.jp/curriculum.html>





GP-RSS Student Financial Support

MC and Declared Ph.D.
Students 博士前期課程

DC and medical Ph.D. students
博士後期課程

Research Assistantship :
Up to ¥1,200,000 / year

Travel :
Summer School Attendance

QE1

Research Assistantship :
Up to ¥1,800,000 / year

JSPS DC1/DC2 Doctoral Research Fellows :
Additional ¥600,000 / year

Travel :
One-time budget of ¥250,000, and subsequent
travel support upon application and review

QE2

Ph.D. Defense

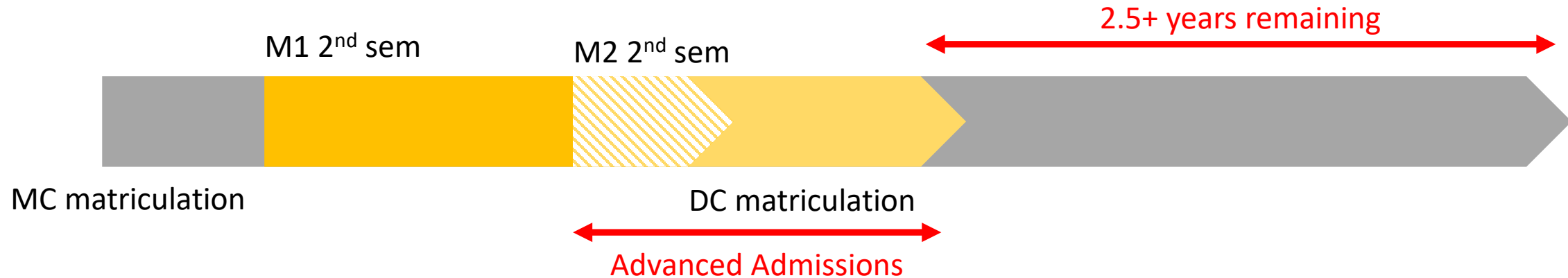
All financial support are subject to annual budgetary review, and may change at any time

Eligible students may be recommended by the program for additional support through alternative fellowships

GP-RSS Admissions

Frequently Asked Questions

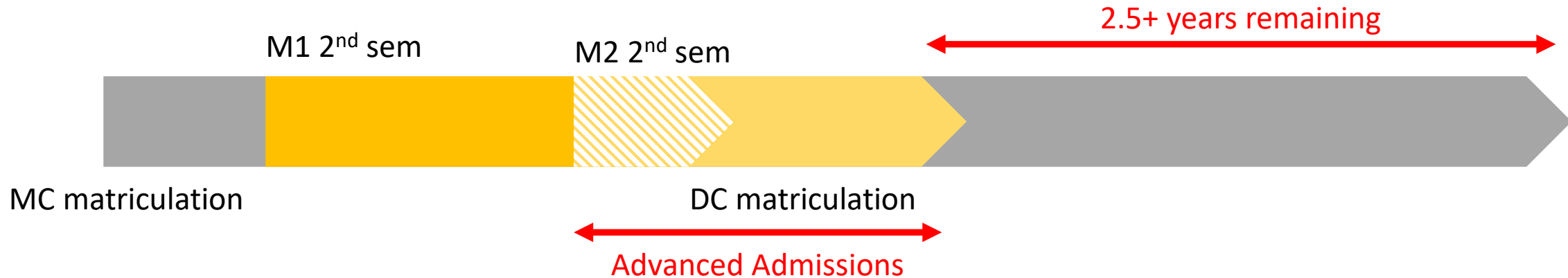
Should I apply if ...



- I am in the final 2 years of my Ph.D.
Due to the coursework requirements of our program, we do not accept students with less than 2.5 years of their Ph.D. left to apply to our program.
- I will be applying for a Ph.D. at Tohoku University (not currently enrolled)
Your enrollment with The GP-RSS is contingent on your acceptance as a graduate student with Tohoku University.

GP-RSS Admissions

Frequently Asked Questions



- Are selection criteria different for when students apply?

YES, since the program is designed for MC students who declare their Ph.D. early, advanced admissions students who wish to enroll with less remaining years in their Ph.D. to complete the program will be screened competitively, especially for their feasibility in international research collaboration (i.e. doctoral research residency).



GP-RSS Admissions

Frequently Asked Questions

- My Ph.D. project only involves domestic research topics
GP-RSS students are required to have an international component to their research. Please discuss this point with your supervisor.
- I am currently funded by another agency
The GP-RSS can offer partial funding through research assistantship to complement your current funding (maximum funding restrictions apply).
All MEXT scholarships and private funding are subject to complementary funding, however, student loans (such as JASSO) are not seen as competing funding (students are responsible for their own finances including taxation).



GP-RSS Admissions

Frequently Asked Questions

- I am an international student on a MEXT Scholarship, and thus required to stay in Japan for the duration of my funding – how does the research residency work?

The International Joint Graduate Program as a whole are aware of this problem, and the response by the GP-RSS will be case-by-case. International students with binding funding may be asked to plan their trips two months at a time, or we may send your supervisor to your location of collaboration to supervise your progress and waive your return.



GP-RSS Admissions

Frequently Asked Questions

- What are some of the criteria that student selection will be based on?

The GP-RSS is interested in selecting students with a high aptitude for international collaboration. We seek strong recommendation from your supervisor, a clear timeline of international collaboration (research residency), and a strong proposal based on research collaboration with universities abroad.

You MUST discuss your Ph.D. plans with your supervisor in advance, and that they are willing to support you in your research plans.

If you do not intend on continuing your Ph.D., we cannot consider you in our student selection.