



Integrated Science Program

The Integrated Science Program at Hokkaido University provides students with a wide scientific knowledge, and is taught in English to prepare graduates for professional careers on an international scale.



北海道大学
HOKKAIDO UNIVERSITY



Integrated Science Program

Program Details

The Integrated Science Program is a cross-disciplinary science program for international students interested in pursuing a degree in the sciences at the undergraduate and graduate level. The program's strong cross-disciplinary nature aims to give students an excellent broad scientific education across the core scientific disciplines (physics, chemistry, and biology), while allowing them to specialize in their chosen fields in later years in accordance with their own interests. In addition to the English-based scientific content of the program, a multitude of additional liberal arts courses focusing on business, leadership and management skills, and the Japanese language will be available to ensure students receive a rich and fulfilling education while at Hokkaido University.



ISP SCHOLARSHIPS AND FEES

We offer a scholarship program for students participating in the Integrated Science Program.

Enrollment fee	We will waive the entire enrollment fee for the Bachelor's degree.
Tuition Fee	Tuition Fee for bachelor's degree and Master's degree is ¥533,800 a year. We will waive the tuition fee for the 1st semester (October 2023 - March 2024) of the Bachelor's degree. After the second semester, selection will be made on an annual basis, and tuition fees for one year or half a year will be waived.

As of March 2023 | The information above is subject to change. This is applicable to those who enter ISP in October 2023.

Entry Requirements

As of March 2023 | The information is subject to change.

- 12 completed years of education in a foreign country or at an approved international school in Japan OR will hold a high school qualification deemed to be equivalent by the time of entrance.

- Language Ability [English]

TOEFL-iBT	TOEFL-iBT Home Edition	IELTS Academic Module
79	79	6.0

*1TOEFL-iBT, TOEFL-iBT Home Edition: 'My Best Scores' will NOT be accepted.

*2Applicants who

- speak English as a native language
- received four years or more of their secondary education (at junior or senior high school, etc.) or higher education (at university or college) in English as their primary language of instruction don't have to achieve any of the English scores.

[Japanese] Not required for admission

- Those who have Japanese citizenship or Japanese permanent resident status are not eligible to apply.

* Above are the basic qualifications. More detailed information about the requirements can be found in our website.

Key Characteristics

Study at one of Japan's oldest and most prestigious universities

Courses taught by a diverse international faculty in English

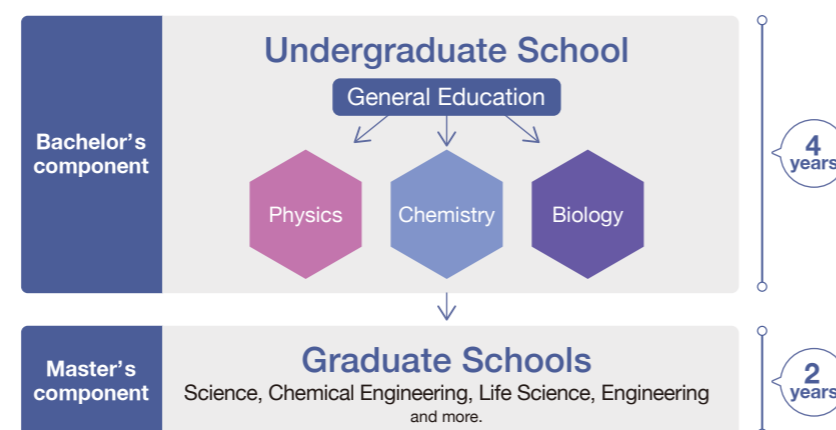
A range of scholarships available

ISP at a Glance

Degrees Offered	Bachelor's Degree (Science) Master's Degree (In your chosen specialized field)
Program Length	4 years + 2 years (Bachelor's) (Master's)

Course Structure

The ISP consists of a four-year Bachelor's degree and a two-year Master's degree. For the first six months of the Bachelor's component, the students take courses in natural science, liberal arts and Japanese. After that, they will start obtaining more specialized knowledge and practical skills in their chosen fields (physics, chemistry or biology). The Master's degree will include active research components, where students will be affiliated with one of the university's prestigious graduate schools to learn the techniques and skills necessary to flourish as scientists or researchers.



We have an early graduation system that reduces the length of the Bachelor's component to 3.5 years for those who fulfill the requirements.

ADMISSION PROCESS



INTERNATIONAL STUDENT SUPPORT

International Student Support Desk

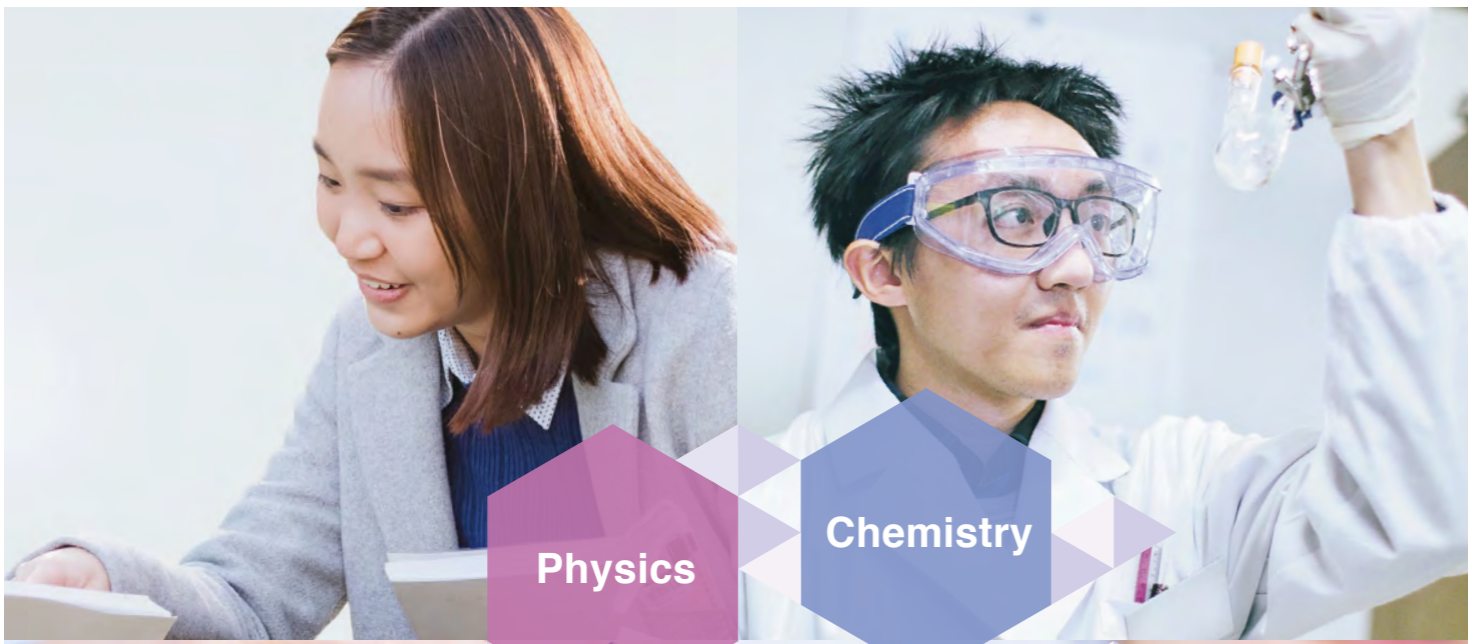
We provide a support desk staffed with international students. If, for example, you have trouble reading Japanese documents, or do not understand procedures at the ward office, the support desk is happy to help.

Counseling and Guidance

A bilingual counselor offers advice regarding difficulties you may have such as adjusting to life in Japan, academic studies, and career guidance for your future after university. Also, an international ISP faculty member is appointed as the home room teacher for successful applicants to liaise with them prior to arrival.

Accommodation

Rooms in university owned dormitories are offered to ISP students for the initial 6 months. These include social communal areas, kitchens and washing amenities. Although Sapporo is ranked as one of the most desirable cities in Japan to live in, the cost of living is especially low for a city of its size.



Physics

Chemistry



Biology

Courses

Study a wide range of subjects for the initial six months and then find the field you want to focus on from **Physics, Chemistry, and Biology**. Develop logical thinking ability and beneficial knowledge for your future career through fulfilling minor subjects: **Mathematics, Special Skills, etc.**

Linear Algebra

Calculus

Faculty Member

Travis SCRIMSHAW

Management Skills

Special Skills

Introductory Japanese

Business Skills

Physics

Integrated Science Program

Studying physics in ISP is a challenging but highly rewarding journey.

Subjects Offered

- Electromagnetism
- Quantum Mechanics
- Statistical Mechanics
- Introductory Complex Function / Introductory Fourier Analysis
- Modern Physics
- Introductory Data Analysis
- Introductory Computer Programming
- Classical Mechanics
- Laboratory Exercises
- Nuclear Physics
- Elementary Particle Physics
- Relativity
- Theory of Fields
- Astrophysics
- Condensed Matter Physics
- Research Work
- Special Lectures

1 WEEK SCHEDULE

Fall-Winter semester 4th year

	MON	TUE	WED	THU	FRI
1			Astrophysics	Nuclear Physics	
2		Condensed Matter Physics Structure of Solids and group theory	Theory of Fields	Relativity	Graduation Research Meeting
3		Research Work in Physics II		Special Lecture on Quantum Mechanics Special functions	Laboratory Meeting and Seminar
4					

ISP Specialized Subjects : Physics
 *The subjects and the time table are just an example and subject to change.

Faculty Members



Dragan SALAK

Welcome to the physics branch of ISP! After one semester of general education, students in our department begin a journey through the world of physics by studying the core subjects, such as mechanics, thermodynamics, and electromagnetism. These are the pillars of classical physics and studying them while developing the skills in high-level mathematics is essential to prepare for more advanced topics of quantum mechanics, statistical mechanics, and relativity. The journey then leads to even more exotic specialized subjects, such as the physics of atoms and subatomic particles, condensed matter physics, high energy physics and astrophysics. The program is designed to equip students with a solid knowledge in physics, skills in critical thinking, and to prepare them for a variety of possible careers in academia and industry.



Arindam DAS

Student Voice



Tim JERIC

Republic of Slovenia



Understanding Science and Enjoying Hokkaido.

For as long as I can remember, I wanted to understand how the world works. In the ISP, I can study that while attending one of the most prestigious universities in Japan, while being able to enjoy the natural beauty of Hokkaido. I am most interested in particle physics and cosmology and the university provides many opportunities for me to learn more about the topics, from classes to special seminars, conducted by professors from other universities. While the program is conducted in English, I also have an opportunity to join lectures conducted in Japanese to broaden my knowledge and interact with Japanese students. There are many opportunities to make friends, both in the physics department and outside of it, so we can encourage each other and study together. Hokkaido also provides many opportunities for fun, both in summer and winter, with its vast natural beauty.

1 DAY SCHEDULE

8:00	9:00	9:30	10:30	12:00	13:00	16:15	19:00	21:00	24:00
Breakfast	Heading to university	Homework in the lab	School 2nd	Lunch	School 3rd 4th	Work in the lab	Go home, Dinner	Relax or Finish work for school	

Stay in the laboratory for a few hours for preparation and review and having a chat with classmates.



TAKE A LOOK AT STUDENT'S PRIVATE LIFE

I like to go cycling and as such, some of my favourite memories are from visiting places around Sapporo with my bicycle.

Chemistry

Integrated Science Program

Stand on our ISP stage to explore the Chemistry World.

Subjects Offered

- Physical Chemistry
- Organic Chemistry
- Inorganic Chemistry
- Analytical Chemistry
- Biological Chemistry
- Literature Survey
- Research Work
- Laboratory Work
- Practice in Computational Chemistry
- Special Lectures
-, etc.

1 WEEK SCHEDULE

Fall-Winter semester **2nd year**

	MON	TUE	WED	THU	FRI
1	Statistical Mechanics I			Organic Chemistry B	Inorganic Chemistry B
2	Seminar in Statistical Mechanics I	Physical Chemistry B	Biodiversity Studies II	Biodiversity Studies III	
3	Laboratory Work in Chemistry A	Laboratory Work in Chemistry A	Laboratory Work in Chemistry A	Laboratory Work in Chemistry A	
4					
5	Elementary Japanese IV	Elementary Japanese IV	Elementary Japanese IV	Elementary Japanese IV	Elementary Japanese IV

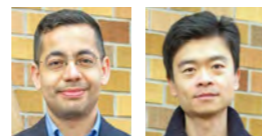
ISP Common Courses : ■ Physics ■ Biology ■ Liberal Arts
*The subjects and the time table are just an example and subject to change.

Faculty Members



Yu SUN

The ISP has general chemistry courses for the first-year students, opening the first door of the colorful world of chemistry. Common subjects such as Physical Chemistry, Organic Chemistry, Inorganic Chemistry and Analytical Chemistry offer whole spectrum of theories of chemistry from basic concepts to advanced skills. Laboratory Work in Chemistry is designed to reinforce the theories by realizing them in experiments. The Department of Chemistry also offers elective subjects for the comprehensive study in specific branches of chemistry. Our integrated-skill pedagogy aims for the stepping-up of the future careers in both academia and industry.



Fernando ARTEAGA ARTEAGA

Ruifeng ZHOU

Biology

Integrated Science Program

Biology is an interdisciplinary field, with many opportunities.

Subjects Offered

- Biodiversity Studies
- Cell Biology
- Functional Biology
- Readings of the Scientific Literature
- Systematics and Taxonomy
- Cell Function and Structure
- Behavioral Neurobiology
- Reproductive and Developmental Biology
- Environmental Biology
- Molecular Genetics
- Systematics and Evolution
- Brain, Behavior and Evolution
- Environmental Molecular Biology
- Biostatistics
- Biological Science Techniques
- Laboratory Courses: Systematic Botany, Systematic Zoology, Ecology, Genetics, Cell Structure and Function, Environmental Biology, Behavioral Neurobiology, Animal Development, Marine Biology, Phycology
- Ecological Surveys of Biodiversity in Forests
- Field Course in Marine Ecology
-, etc.

1 WEEK SCHEDULE

Fall-Winter semester **4th year**

	MON	TUE	WED	THU	FRI
1			Environmental Biology II		
2	Systematic and Taxonomy II	Cell Function and Structure II			
3	Laboratory Course in Cell Structure and Function/Environmental Biology	Laboratory Course in Cell Structure and Function/Environmental Biology	Laboratory Course in Cell Structure and Function/Environmental Biology	Laboratory Course in Cell Structure and Function/Environmental Biology	Laboratory Course in Cell Structure and Function/Environmental Biology
4					
5					

ISP Specialized Subjects : ■ Biology
*The subjects and the time table are just an example and subject to change.

Faculty Members



Kevin WAKEMAN

Biology is rooted in the study of life on Earth. At its core, this field seeks to address living systems across fundamental units: the cell (cell biology), individual organisms (physiology and functional biology), and the relationships between organisms and ecosystems (Ecology). To this end, the ISP at Hokkaido University is focused on the education of students broadly interested in the biological sciences. In the first years of the program, students in the Biology stream will take courses and labs focused on the basics of biodiversity, cell biology, functional biology, and ecology. In the final year(s), students will join a laboratory, and conduct intensive independent research in fulfillment of a Bachelors and Masters degree.

"Nothing in Biology Makes Sense Except in the Light of Evolution" — Theodosius Dobzhansky 1973



Marcel Pascal BEIER

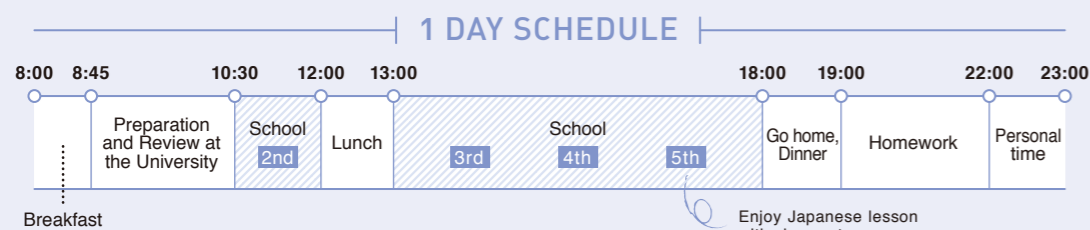
Michael SCHLEYER

Student Voice

Aituar TULIPKALIYEV
Kazakhstan

Experiencing the life and science in Japan with ISP.

The ISP provides an opportunity to combine science and Japanese language studies. From my teenage years, I began to get more and more interested in Japanese culture, in particular anime and Japanese music. Since then, I have dreamed of visiting Japan and the ISP gave me this opportunity. Most of the lessons in the ISP are taught in English, which is extremely unique to the Japanese Bachelor's degree. However, you will have to study hard to master the curriculum. If you are ready to challenge yourself, then the ISP program is for you!



This picture of shrine was taken on the top of Mount Moiwa. Mount Moiwa is one of the most famous mountains in Sapporo.

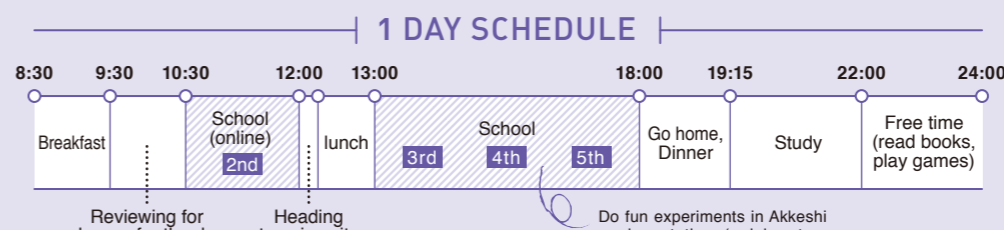
Student Voice

NANG Moon Siri
Myanmar

Build your science future at ISP.

Studying in the ISP at one of the top universities in Japan has not only allowed me to explore different areas of science but also develop skills to apply in my future science career. Hands-on laboratory experience, a big part of ISP, has given me the opportunity to apply science concepts learned in class and immerse myself in an environment that differs from that of a typical classroom. Furthermore, since lab classes are conducted together with everyone, I've had the chance to interact with Japanese students who are as passionate about science as I am.

As someone who dreams of becoming a scientist and studying in Japan, ISP is the ideal program for me.



I got the chance to participate in the marine ecology field course at Akkeshi marine station and enjoy the beautiful sunset from the eastern coast of Hokkaido.

Voice of Graduate

My experience at the ISP

Ranjani RAJAGOPAL

Graduate School of Science / India



I graduated from the bachelor's program last year and am currently enrolled in the Graduate School of Science at Hokkaido University. The small class size and seminar style classes in the ISP bachelor's program are ideal for students aiming to become researchers. Students can make the most out of the ISP master's program by learning additional skills essential for researchers such as creative thinking, problem solving and proposal writing at 'Nitobe College'. Through my experience at Nitobe College, I also gained hands-on experience on applying and honing soft skills like leadership and collaboration. In addition, Nitobe College also gives you access to a wide alumni network and mentors which opens you to an ocean of opportunities beyond your field of study.



Nitobe College completion ceremony

I completed both the Foundation Program and the Honors Program for Graduate Students at Nitobe College and was selected to represent my class at the completion ceremony. Nitobe College has facilitated immense personal and professional growth for me. I would highly recommend ISP to anyone who wants to become a researcher with well-rounded soft skills.

*Completing the Foundation Program for Graduate Students of the Nitobe College is one of the requirements for the completion of ISP.
Nitobe College: <https://nitobe-college.academic.hokudai.ac.jp/en/>



Integrated Science Program at Hokkaido University

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Integrated Science Program Office

isp@oia.hokudai.ac.jp +81-(0)11-706-8049

Admission Center (for admission inquiries)

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Hokkaido University's
Integrated Science Program



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isp.hokkaido

For more details,
please visit
our website.



<https://www.oia.hokudai.ac.jp/isp/>