What Is the Program for Leading Graduate Schools?

Program for Leading Graduate Schools works to advance the establishment of university graduate schools of the highest caliber by supporting the dramatic reform of their education programs in such a way that they will institute degree programs recognized as top quality around the world. To foster excellent students who are both highly creative and internationally attuned and who will play leading roles in the academic, industrial and governmental sectors across the globe, the program brings top ranking faculty and students together from both in and outside Japan and enlists participation from other sectors in its planning and execution, while creating continuity between master ' s and doctoral programs and implementing curricula that overarches fields of specialization.

(From the National Institute of Japan Society for the Promotion of Science website at http://www.jsps.go.jp/english/e-hakasekatei/index.html)

Ochanomizu University

Leading Graduate School Promotion Center

2-1-1 Ohtsuka, Bunkyo-ku, Tokyo, Japan 112-8610

03-5978-5775

leading-ocha@cc.ocha.ac.jp

http://www.cf.ocha.ac.jp/leading/

Ochanomizu University Program for Leading Graduate Schools

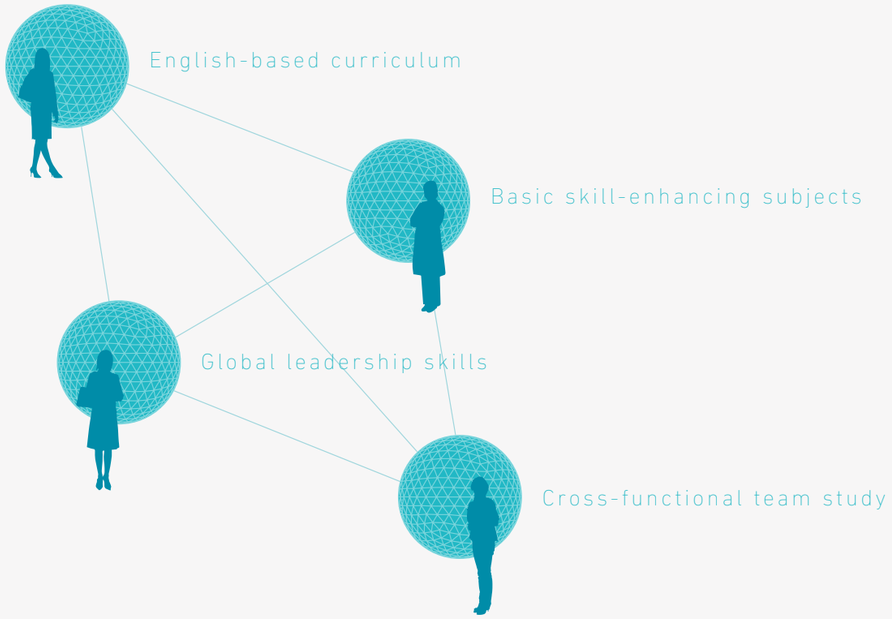
Fostering long-term creativity and innovation with science and technology disciplines based on Ochanomizu spirit “Migakazuba” in the next generation of global leaders

Ochanomizu University

Introduction

The spirit of “Migakazuba” featured in the school song has been carried on through generations at Ochanomizu University over our 140 years history. In this spirit, we strive to develop global leaders in science and technology.

In the 2013 school year, the “Minor Course of Science and Technology for Global Leaders” combined masters and doctoral program was established through collaboration between the Division of Advanced Sciences and the Division of Life Sciences for the purpose of developing outstanding students into global leaders in Science and technology. This program features active student-centered study environment and offers an English-based curriculum.



Program Title : ≪Fostering long-term creativity and innovation with science and technology disciplines based on Ochanomizu spirit “Migakazuba” in the next generation of global leaders≫

Program Goal : develops female scientists to respond to rapidly changing social needs based on the fundamental knowledge of physics, mathematics, and computer science. Our program’ s educational goals are : (1) achievement of fundamental skills and (2) innovation-driven research and development and leadership skills, in collaboration with different scientific fields. To realize the latter goal, this program introduces PBTS (Project Based Team Study) as a unique method allowing students to practice effective team project management and research. This program evaluates progress precisely by maintaining functional strict Global Point Average (GPA) and several types of Qualifying Examinations (QEs) based on rubric assessment.

Polish yourself, aim to be a Woman Global Leader who gets out into the world

Kimiko Murofushi, Ph.D.
President, Ochanomizu University

Ochanomizu University was selected in 2013 to participate in the "Program for Leading Graduate Schools" by the Ministry of Education, Culture, Sports, Science and Technology, and started to foster global leaders in the fields of science and technology.

This Program is built toward the goal of "Fostering long-term creativity and innovation in science and technology disciplines based on Ochanomizu spirit 'Migakazuba' in the next generation of global leaders", where the title is derived from our school song — a gem or mirror is only produced through the act of polishing; the same is true of those who take the path of learning. Our wish is that those studying in this university will regard themselves as uncut stones and polish themselves into true gems, devoting themselves to producing innovations in many different fields. We hope you will grow into talented women who will change the world for the better.

Ochanomizu University was established in 1875 as Japan’ s first institution of higher learning for women, making this year the 140th anniversary of its founding. The high-quality education and superior research fostered throughout our history are what formed the foundation for developing this program. It is our hope that through this program you will achieve self-directed learning and self-improvement, proactively participate in hands-on activities aimed at bettering society and the world, and grow and develop into global women leaders who soar on the world stage.

We hope that all of you—with your high ideals and strong wills—will participate enthusiastically in this program with the goal of developing into women who propel the world forward by tackling global problems with a broadly inclusive viewpoint.

The Ochanomizu Spirit of “Migakazuba” - Polish a rough gem to change society -

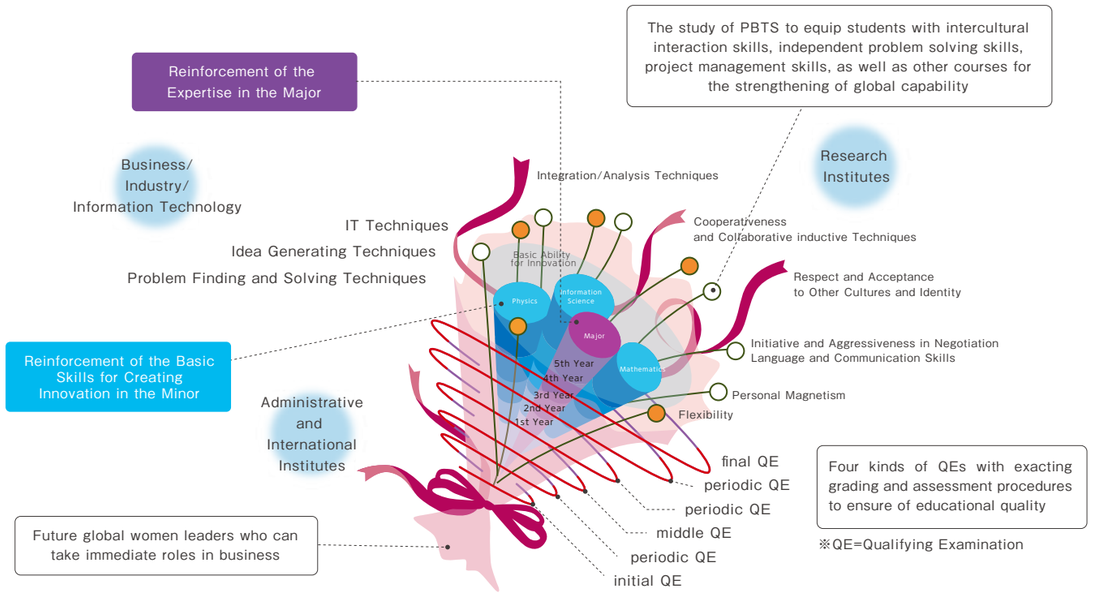
“Migakazuba” is the song bestowed on the Tokyo Women’ s Teachers College the predecessor to Ochanomizu University – in Dec. 1875 by Empress Meiji (Empress Dowager Shoken). This was set to music in “ICHIKOTSU-CHORITSU-SEN” by the court musician Suehiro Togi and selected as the school song in Oct. 1878 and continues to be sung to this day. Based on this spirit, the school seeks to develop global leaders who continue to create innovation in the disciplines of science and technology.

① Program Missions

Introducing our Program's guide to students' growth and development.

Future women global leaders who can take immediate roles in business

The progress of a student is portrayed as a fanning bouquet of flowers, presenting the educational offering of our program.



To everyone who aims to be a Woman Global Leader

Haruko Ogawa
Program Director
Trustee and Vice President

Historically the expectation for post-graduates has been the ability to function as specialist personnel. Today expectations go beyond specialist knowledge in a single field and extend to solving wider-cast problems that relate to society at large.

Problems to be resolved besetting the world and Japan are diverse and numerous. Examples are global warming and other environmental problems, contagious diseases that have high fatality rate, war and terror, world food supply, and other global issues. Furthermore, at the national level, there are number of problems that are sheer endless, such as Japan's fiscal deficit, declining birthrate and population aging. Their solutions require new approaches and the power of action in many locations on the ground, that is, in business, politics, education, medical care, and other fields. Needed today is not the one-dimensional specialist but personalities who are able to see the whole picture and use scientific thinking for devising effective countermeasures from novel angles of approach, and are sufficiently strong-willed to put these measures into action. The faculties of thought, judgment, negotiation, and linguistic skills required by these persons can be gained at the Leading Graduate Schools. I hope you will acquire the scientific capability to address the needs of society today through this program. We look forward to your participation.

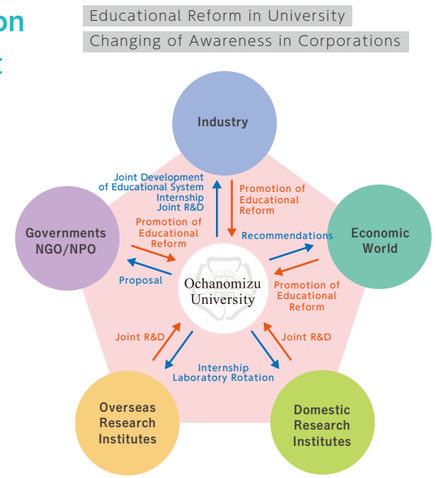
We Will Assist You in Polishing Yourself

Hazuki Furukawa
Program Coordinator
Professor, Department of Physics
Division of Advanced Sciences

In order to be a doctorate holder in the disciplines of science and technology capable of doing work that put both society and people in motion, you have to get a multifaceted perspective and the capacity to accept others in addition to the acquisition of a high degree of expertise. Based on the assumption that getting a high angle view and reinforcement of competencies as an individual are contingent on gaining opportunities to objectively see one's own situation, this program aggressively promotes to send students in the program to global internships at corporate research organizations both inside and outside of Japan. Use these opportunities to expand your field to the larger global community, then let's think what you can do for the society from that position. In this program, we assist you in polishing yourself in a collegial community of peers who share higher aspirations.

Taking a Role of a Hub for Strong Cooperation Between Industry, Academia and Government

A variety of talented people from industry, academia and government (e.g., SOKENDAI, TOKODAI, RIKEN, NII, ISM, IMS, KEK, AIST, SONY, IHI, TOSHIBA, Nikon, and prominent companies and institutes overseas) participate as program members and/or advisory board members. With those members, Ochanomizu University implements the program while taking a role as a hub for their cooperation, and promotes the advancement of talented people with doctorates into society. As part of our program, laboratory rotation in partner institutions is performed to widen perspective and raise research capability in students.



Message from Participating Members of the Business Community

As a global leader in specialty chemicals, LANXESS provides products and technologies to answer questions resulting from global trends like resource management, urbanization and mobility. Besides investing into research and development, our success lies in our people who, through their work, enable LANXESS to be effective. We are not only focusing on knowledge and excellent scientific qualification, we also require good communications skills and a high motivation to work in cross-cultural and cross-functional teams. Ochanomizu University's program perfectly ties into such requirements. Japan has been since long a rich source of thoughtful and creative people whom we are pleased to have on our teams. At LANXESS we encourage employees to take ownership, because only those who feel responsible will consistently contribute to successful developments. A graduate's participation in this program will be a perfect step in taking ownership over her own development.

Luis López-Remón
Senior Vice-President,
LANXESS GmbH

Diversity management is being considered as an important management strategy to take for businesses to become more competitive in a Japanese society that is rapidly globalizing.

This is one form of logic that constitutes an important quality in global leaders who utilize the competencies of people with differing values and organize them into a single direction. I have always made a point of remaining mindful of the analytical ability and logical thinking process to pursue the true essence of things, as well as the ability to accurately convey that. I think that individuals who have learned the advanced sciences are capable of exercising problem solving skills when facing business challenges.

It is my hope that this program produces the kind of global leaders who change the world.

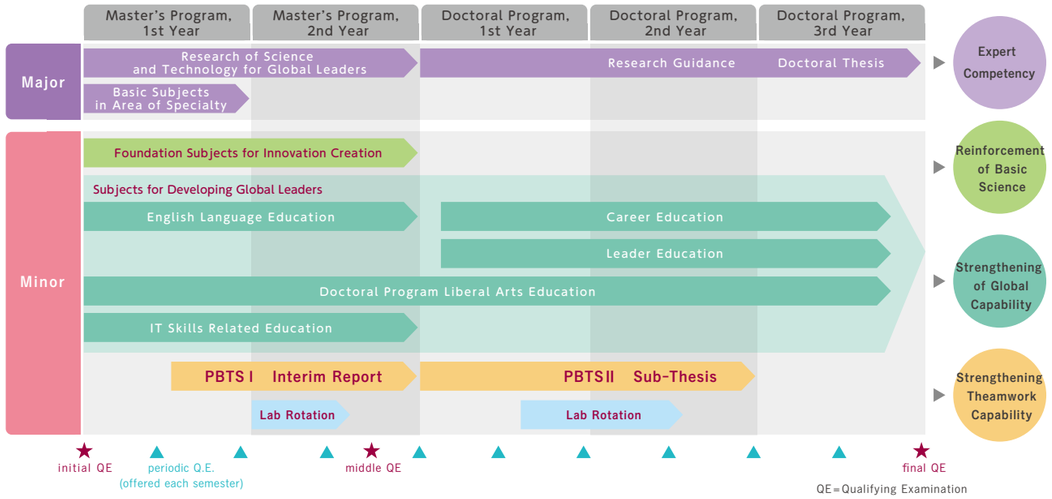
Yukako Uchinaga
Board Chair Japan
Women's Innovative
Network (J-Win)
NPO Organization

② Curriculum

Students complement their study in the Major with our Minor program, reinforcing basic science and strengthening global and teamwork capability.

Outline of the Global Science and Technology Minor Curriculum

Students work together on research topics in their minors while continuing their research in their respective majors.



Ⅰ Innovation Creation Fundamental Courses — 10 or more credits required (6 credits required)

- Essential **Physics** for Global Leaders Ⅰ & Ⅱ
- Essential **Mathematics** for Global Leaders Ⅰ & Ⅱ
- Essential **Computer Science** for Global Leaders Ⅰ & Ⅱ
- Essential **Chemistry** for Global Leaders Ⅰ & Ⅱ
- Essential **Bioinformatics** for Global Leaders Ⅰ & Ⅱ
- Essential **Engineering and Technology** for Global Leaders Ⅰ & Ⅱ

2 Global Leader Development Courses — 10 or more credits required

- **English Courses** (Reading, Writing, Presentation)
- **Career Courses**
- **Leadership Courses**
- **Liberal Arts Courses** (Doctoral Program)
- **Information Technology Related Courses**

3 Project Based Team Study Ⅰ&Ⅱ — 14 credits required

The pursuit of interdisciplinary topics in project teams

4 Global Internship Ⅰ&Ⅱ — 3 credits required

Internships at research institutions and corporations, etc., in Japan and overseas

Reinforcement of Basic Science

Innovation Creation Fundamental Courses

Courses are held in English and are open to all Graduate School students.

Essential Physics for Global Leaders Ⅰ&Ⅱ

Physics is a science that underlies all other natural sciences and many modern technologies. The student will pick up the basic methodology of the field and many of the jargon through each topic such as Classical Mechanics, Electromagnetism, Thermodynamics, Nuclear & Particle Physics and Basics of Quantum Mechanics.

Essential Chemistry for Global Leaders Ⅰ&Ⅱ

This course conveys the excitement of contemporary chemistry, exploring the frontiers of research and applications of chemistry and relating them to the basic chemical concepts. By linking chemical storylines to the chemical ideas it is hoped that students will be able to relate that knowledge to its relevance in the real-world.

Essential Mathematics for Global Leaders Ⅰ&Ⅱ

Essential Maths is targeted to students who have not attended a math course since some time and as such, the main purpose is to reactivate basic mathematical notions already learned. It is important in Mathematics to practice in order to grasp knowledge, therefore some short Practice Sessions will be set.

Essential Bioinformatics for Global Leaders Ⅰ&Ⅱ

Bioinformatics involves the use of computational tools/databases to generate biological knowledge and better understand living systems. This set of classes let the students grasp the general idea of bioinformatics, its logical background and its application.

Essential Computer Science for Global Leaders Ⅰ&Ⅱ

In this course, light will be shed on some of the fundamental concepts of computer science: data storage, operating systems, programming languages, networking and the internet. the recent trends will also be discussed in order to understand the current expansion of this discipline.

Essential Engineering and Technology for Global Leaders Ⅰ&Ⅱ

This course focuses on health technologies, especially the ones able to play a beneficial role in the prevention of non-communicable diseases and the extension of healthy life expectancy. First, students will increase their knowledge on some medical technologies and outcomes that are traditionally used. Then, they will focus on new home-based and mobile technologies.

Message from a teacher

I am teaching two courses "Essential Mathematics for Global Leaders". I want to teach "useful mathematics". From my experience, any kinds of "useful mathematics" are making use of computers nowadays. So I try to introduce mathematical software in these courses, along with how to use them for solving important differential equations occurring in Science. Come have a look!

Xavier Dahan

Strengthening Global Capability

Subjects for Developing Global Leaders

Courses are held in English and are open to all Graduate School students.

- **Essential Ethics for Global Leaders**
- **Essential History for Global Leaders**
- **Essential Culture and Arts for Global Leaders**

Doctoral course students, who tend to be fully immersed in their specialty fields, will learn to appreciate the importance of acquiring perspectives of society and thinking modes outside their fields of specialization. Moreover, they will acquire an international education to achieve proficiency in the skills of articulation, communication, and interaction at international conferences and symposiums in the future.

［Extra-curricular activities］

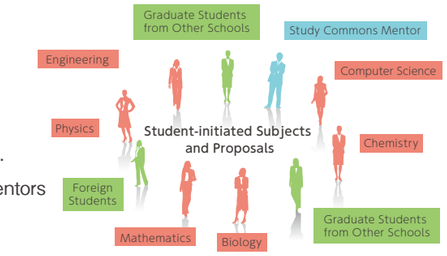
At the Kabuki theater

3 Project Based Team Study

The most distinguishing characteristic of this program is Project Based Team Study (PBTS), where students from various fields of specialization form teams and engage in self-imposed research tasks.

Putting PBTS to Practice (team skills)

- Models are based on research cases in actual businesses.
- Each team develops a project based on a student-initiated subject.
- The Study Commons space serves as the activity base, where many mentors – with a majority of non-Japnese ones – support students.
- A doctorate sub-thesis is jointly written in English by the team. This paper is used as a screening material in the doctorate degree examination.



Voice of program Students

1 What are your reasons for selecting this program?

- Living life in a lab makes it almost impossible to have discussions with those from other fields. I applied for this course because I wanted to get that sort of opportunity before getting a job.
- I decided to commit myself to five years of study because I wanted the expertise in the disciplines of science and technology but also wanted to improve all other skills, such as English language and team research. Being able to do that appealed to me. I wanted to improve by continuing with day-to-day efforts.

2 Describe PBTS meetings and classes in your view.

- Amid discussions in English, there are serious efforts at getting to know each other's field of research. There is laughter from time to time, and the activities are pleasurable to be engaged in.
- I hope to be more capable of contributing to the discussions. (When the conversation is in English, I find myself suddenly stop speaking, so I hope to make efforts at taking a more active part.)
- Classes are held by teachers who are friendly and passionate, with English as the working language. Though the content and English can be difficult, we are engaged in activities in a climate of friendliness and openness in which students teach each other about their fields of specialty.

3 What is the most appealing feature of this program?

- The support students get to become active globally. And you can have lively discussions with students majoring in other fields, which creates an environment in which we can improve each other. This allows me to experience a learning process that is different from regular research life.
- It's exciting each and every time to learn something new from students and teachers whose fields of specialty I know nothing about. The most appealing aspect is being able to do a research as a team through discussion and collaboration.

PBTS Ⅰ (Master's Program)

Students form teams based on their research topic program and subsequently work on solutions for self-imposed tasks. Topics relevant to solutions to various problems are identified in discussions held from an international point of view. The research is characterized by interdisciplinary perspectives comprising topics as diverse as factory drainage, educational tool development, propositions for addressing aging population issues, and myocardial cell models.

PBTSⅡ (Doctoral Program)

Teams are required to co-author a doctoral sub-thesis (in English).

Message from a student

Learn about the importance of articulating one's opinion

My major is computational biology and I use computational techniques to analyze protein structure data. In PBTS, I study the synchronization phenomenon of cardiac muscle cells by participating in seminars and visiting research institutes with the team members. I have learned the importance of communication, as the team consists of students whose majors are different. I have come to think of the meaning of working as a project team. I would like to continue to do my best and make the best out of this opportunity.

Computer Science, the Division of Advanced Sciences **Midori Yano**

Message from a teacher

This program offers the students the possibility to interact with scientists from various countries and study abroad. By broadening your horizons, this program will help you to build your personality and find the best innovative ideas to become a real global leader.

Sabine Gouraud

4 Our Supports for Students

The graduate school has a complete support system that includes well-maintained research environments and grand in aid benefits.

Global Internship I&Ⅱ

Students can experience long-term internships twice in Japan and/or abroad at research institutions, corporations, and/or other universities. In order to further advance research in PBTS, students have the opportunity to engage in research outside Ochanomizu University for periods from three to six months for Global Training I and from six to twelve months for Global Training II.

Global Internship Ⅰ …… 3 - 6 months (Master's Program, 2nd Year)

Global Internship Ⅱ …… 6 - 12 months (Doctoral Program, 1st - 2nd Year)

* Destinations chosen by our students in academic year 2015

New York University (USA), Virginia Polytechnic Institute and State University (USA), University of Oxford (UK),University of Strasbourg(France)
Pirapo Japanese Association Medical Clinic (Republic of Paraguay), National Institute of Health and Nutrition (Japan), etc.

Global Internship I report

Dispatch to New York University March-June 2015

Computer Science, the Division of Advanced Sciences (M2)
Yuyu So

During the first half of my internship, I attended several seminars for graduate students. Every week the professors gave us a lot of assignments, so I had to spend my weekends reading papers and writing code at a cafe. After the spring semester, I presented my PBTS research at a symposium held at Wesleyan University in Connecticut. It took almost five hours to get there, but I was happy to be able to get positive comments and insightful suggestions from the audience. Of course I had some non-academic activities, too. I enjoyed playing the piano at NYU and eating delicious dumplings in Chinatown.

Dispatch to the University of Oxford April-July 2015

Mathematics, the Division of Advanced Sciences (M2)
Kanako Enoyoshi
(Photo right)

I am making a mathematical model which expresses the growth process of seashells by using knowledge of differential geometry. It is very interesting to know how we apply the way of thinking in pure mathematics to describe biological world. My supervisor is so kind and tells me the fundamental knowledge and its application. I am really enjoying studying.
Oxford is a beautiful town surrounded by a lot of greenery, and people here are so relaxed and friendly. Thanks to living far away from daily life in Japan and communicating with people who have different cultures, I am getting better at thinking about various things from new points of view.

"Special Practice in Global Science & Technology Ⅰ-Ⅵ"; using state-of-the-art scientific instruments

These courses are another special feature of this program, which are designed to broaden students' interdisciplinary perspectives through "Practical Course Work" using state-of-the-art instruments from dissimilar fields. Students will experience course work in fields such as biology, manufacturing, food and environmental substance measuring, substance structures and substance interaction, physics (inorganic materials), etc.

Courses

Ⅰ Biology Course 8sessions
Ultrapure water system, Liquid scintillation counter, etc.

2 Manufacturing Course 6sessions
Eye-Movement measurement device, 3D printer & NC milling machine, Humanoid robots, etc.

3 Food & Environment Material Measurement Course 6sessions
Gas chromatography-mass spectrometry, Ultracentrifuge, Digital microscope, etc.

4 Material structure and interactions Course 6sessions
Recycling preparative HPLC, High precision balance, Automatic polarization analyzer, etc.

5 Physics (inorganic substances) Course 6sessions
X-ray crystal structure analysis system, Physical properties measurement, Cryogenic refrigeration unit, etc.

Strict Performance Assessments and Study Support Systems

The program introduces functional strict Grade Point Average (GPA) and four types of Qualifying Examinations (QE) based on rubrics for accurate assessments of the performance. To implement the assessments, we have developed three types of supporting systems – 1) Assessment of achievement at the Leading Graduate School, 2) Study Portfolio, 3) Utilization of the Study Commons. The program also introduces the Teamwork Portfolio System as the assessment basis for PBTS.

Image of Portfolio System

Support System to Students

- PC lending
- Subsidies for air fare and accommodation during Global Internship
- Use of research labs for PBTS
- Grant-in-aid benefits

(→ See page 12 for details.)

Message from a student

The reason I decided to join this program was the desire to acquire skills to do actual work in a global environment. Considering the funds needed for research and surveys, I am most grateful that thanks to a grant-in-aid provided by the program I can fully focus on my studies also overseas.

Food and Nutritional Sciences
Division of Life Sciences
Yuko Caballero

5 Study Commons

PBTS research is supported by Study Commons teachers from countries around the world. They are also charged with the delivery of the innovation creation base program ("Essential" classes) which is a part of this main program. (see page 6)

Messages from Study Commons Teachers

Having professional experiences at top-ranked universities in several countries, I began work as an associate professor at Ochanomizu University in April 2014. I teach two courses "Essential Computer Science for Global Leaders-I&II", which discuss about fundamental computing concepts, programming, and practical computational algorithms that lead to acquire problem solving skills. My current focus of the research is the application of mathematical, image and signal processing, and machine learning theories to address problems in biomedical engineering and sciences.

Md. Khayrul Bashar, Project Associate Professor
[Image Analysis and Computer Vision]

I love applied mathematics and to learn how this can be useful for Society! As a student in France, I studied abstract topics like algebraic geometry and commutative algebra. I changed to computational mathematics for my PhD and then I discovered wonderful multi-disciplinary themes in applied mathematics. I could considerably broaden my vision of research, which has kept diversifying so far: computational algebra, cryptography, graph theory and now some biological mathematics at Ochanomizu.

Xavier Dahan, Project Associate Professor
[Applied Computational Algebra]

I began work as an associate professor at Ochanomizu University in October 2014. The program is a huge challenge for both teachers and students. In this program we are not simply aiming for students to successfully complete a research program, we also want students to participate with other students from different backgrounds and design a new project from the very beginning by incorporating all of the group members' different skills.

Gary Richards, Project Associate Professor
[Supramolecular Chemistry and pi-Conjugated Materials]

I am French and I lived in several countries for conducting my research works. I moved in Japan in 2012. My current research works aim at developing innovative strategies to make people move! Physical activity is known as the best prevention tool against cardiovascular diseases. I believe that the current emergence of smart ICT can also help people to develop healthier lifestyles.

Julien Tripette, Project Associate Professor
[Health promotion]

I am from France. My biological research interests are focused on the brain mechanisms underlying essential hypertension and gender differences in cardiovascular regulation. I studied and worked in some different countries. From my experience, I believe that communicating with people from various countries and experiencing other countries working styles is the most efficient way to develop your global mind and build your own scientific personality.

Sabine Gouraud, Project Associate Professor
[Molecular Biology and Physiology]

Plants have a remarkable ability to adapt to environmental stresses such as drought and low temperature. I am interested in studying how such adaptive responses are regulated and coordinated with growth, and how the regulatory mechanisms have evolved in plants. As a member of the Study Commons, I would like to see Ochanomizu science students to flourish in international communities, and with my research experiences abroad, I am hoping to be able to support students and help them developing scientific understandings and communication skills.

Yuki Yasumura, Project Lecturer
[Plant Molecular Biology]

The unifying theme of my research interests is theorem proving, which is the computer-assisted proof of theorems. Proving with programs is primarily motivated by the formalization of sound, complete and correct mathematical methods. For instance, my research in ***computational origami*** addresses the proof of correctness of origami geometric constructions. This program is an opportunity for students to work in a multidisciplinary team and expand their scientific research.

Fadoua Ghourabi, Project Lecturer
[Theorem proving]

I have a Masters' degree in Mechano-Informatics Engineering from the University of Tokyo and a PhD in AI (Robotics) from the University of Edinburgh. I have worked as an engineering professor at the University of Nottingham and KAIST. I am also an OB of RIKEN, Waseda University, University of Waterloo and HKU. My research areas include AI, Biomechanics, Brain Science, Dance Technology, Mechatronics Engineering and Robotics. Contact me if you want to learn from the real, experienced engineering professor.

Jimmy Or, Project Lecturer
[Advanced Interdisciplinary Research in Art, Science and Engineering]

Intermolecular interaction between molecule and surrounding solvents plays an important role in the determination of chemical reaction and the dynamics. My principal research interests lie in the field of molecular dynamics and chemical reactivity in complex and simple fluids studied. In this program, I would like to support students to discover their new interests and capabilities by interaction with students from different fields.

Minako Kondo, Project Lecturer
[Chemistry, Molecular Spectroscopy]

My field of expertise is DNA computing, a type of molecular programming. Molecular programming is just like "regular" computer programming, except that instead of electric signal, data are encoded in molecular concentrations. Operations on data are chemical reactions occurring among them. In DNA computing, all molecules considered are either made of DNA, or related, which are both easy to synthesize and efficient to program. This is a strongly interdisciplinary field, with required expertise from Biology, Chemistry, Computer Science and more.

Natanaël Aubert-Kato, Project Assistant Professor
[DNA computing]

6 Program Application Outline

Student selection for this program takes place during the entrance examination period for the Graduate School.

<Program Student Maximum Capacity>

About 15 students per school year

<Who can apply?>

Program applicants must be students who plan to enroll in one of the Major courses on the right, at Master's level in Ochanomizu University's Graduate School, and expect to proceed to doctorate (including non-Japanese candidates).

Courses:

Division of Life Sciences	Division of Advanced Sciences
Food and Nutritional Sciences	Computer Science
Human-Environmental Sciences	Chemistry and Biochemistry
Biological Sciences	Physics
Genetic Counseling	Mathematics

<Selection Process>

1. Application Procedures — The application documents must be submitted by post or in person before the deadline of the application period.

2. Selection Examination — Selection will be done by documents and candidates will be interviewed after giving a presentation.

3. Notice of Results — Successful candidates will be notified on the program website.

*Ochanomizu University holds entrance examinations for the Graduate School Master's course in August and February, followed by the selection for the Ochanomizu Leading Program. Details about student briefings to be held and the selection for our program will be available on our website.

http://www.cf.ocha.ac.jp/leading/

<Documents for Application>

Resume, Essay on Reason for Application, PBTS proposal, Evaluation document, Copy of Bachelor's degree, Recommendation letter, Academic transcripts of Grades, A photocopy of TOEIC© official certificate or TOEFL© official score report, Enrollment application, Examination ticket with photograph, Envelope for sending examination ticket.

<Grant-in-Aid>

The program offers Grant-in-Aid for students recognized for academic excellence in order to enable them to pursue their studies and research. For the duration of the Master' s Program, 170,000 yen (planned) per month will be awarded.

7 Program Members

Course completion under this program and PBTS activities are supported by the faculty of Ochanomizu University.
Contributors of counsel and advice for PBTS activities are supported by the Program Members of outside of university, including other universities, institutes in industry, corporations and NPOs.

Program Members (inside)

Program Director

Haruko OGAWA Trustee and Vice President
Glycobiology, Glycoscience

Program Coordinator

Hazuki FURUKWA Professor
Physics, Strongly correlated electron system, Neutron science, Material science
Department of Physics
Division of Advanced Sciences

Program Audit and Personnel

Hideyuki MAJIMA Vice President
Differential equations in the complex plane, History of mathematics

Tetsuyuki KOBAYASHI Professor
Biopharmaceutics, Functional Biochemistry
Department of Biological Sciences
Division of Life Sciences

Aya TANATANI Associate Professor
Medicinal chemistry, Organic chemistry
Department of Chemistry and Biochemistry
Division of Advanced Sciences

Curriculum

Keiko TAKANO Professor
Physical chemistry, Theoretical chemistry, Computational chemistry, Quantum chemistry
Department of Chemistry and Biochemistry
Division of Advanced Sciences

Hiroaki YOSHIDA Professor
Non-commutative analysis
Department of Computer Science
Division of Advanced Sciences

Yuji OHTA Professor
Biomedical engineering
Department of Human-Environmental Sciences
Division of Life Sciences

Yoko FUJIWARA Professor
Nutritional science
Department of Food and Nutritional Sciences
Division of Life Sciences

Katsuyoshi KOBAYASHI Professor
Surface physcis, Nano-scale physics
Department of Physics
Division of Advanced Sciences

Tetsuo DEGUCHI Professor
Soft matter physics, Mathematical physics, Statistical mechanics
Department of Physics
Division of Advanced Sciences

Masato OGUCHI Professor
Network computing
Department of Computer Science
Division of Advanced Sciences

Takanori KONO Assistant Professor
Experimental particle physics
Ochanomizu University Academic Production

Evaluation and Qualifying Examinations

Shinji YAMADA Professor
Organic chemistry
Department of Chemistry and Biochemistry
Division of Advanced Sciences

Motohisa HANDA Professor
Theoria on intelligence ambient
Learning Support Center
Campus Educational System Reform Division

Midori KASAI Professor
Cookery Science
Department of Food and Nutritional Sciences
Division of Life Sciences

Gi-Chol CHO Professor
Particle physics
Department of Physics
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