



Advanced Doctoral Program in
Global Resource Management

Doshisha University

Aiming at fostering challenging global
leaders to realize societies with
multicultural coexistence

GRM alumni who actively involved in society

Questions and Answers

GRM program started in AY2012. With so many students gaining in-depth experience, we have improved our strength as a global leader and fought to society. The fields they are actively engaged in are diverse. We introduce the voices of the alumni who are playing an active part in various stages around the world.



Q3 In what kind of situations did you find it positive and helpful to have learned from GRM program as you work for the current company?

A These days, companies are expected to have an understanding of SDGs (Sustainable Development Goals). I learned the basics of SDGs in the GRM program, so it is relatively easy for me to understand them.

(Doi Kenta)

I was lucky enough to get a job in the company where I was an intern in the GRM program. My experience during that internship is directly related to the work I do now.

(Dipak Gaire Sharma)

I need to cooperate with many stakeholders during my work, the teamwork skill I have learned from GRM helped me a lot.

(Liu Xiao)

By participating in the GRM program, you will be able to think how basic knowledge can be applied and present your opinions to other people with confidence.

(Takagi Akuto)

GRM program taught me the interpersonal and communication skills. I have learned on the difference cultures through the friendship of GRM students.

(Chayadit Pumaneratkul)



Q1 What are the reason(s) you decided to participate in the GRM program?

A I decided to take part in the GRM program because I thought I could gain practical and multicultural experience and skills on a world scale through the program.

(Doi Kenta)

The biggest draw for the GRM program when I was applying was the diversity of opportunities that it offered.

(Dipak Gaire Sharma)

I was touched by GRM program providing knowledge integrating Social and Engineering Studies, fostering leaders who can tackle issues in developing countries.

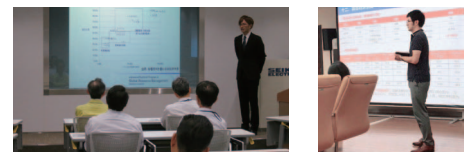
(Liu Xiao)

I have been interested in the human resource management.

(Takagi Akuto)

To be a good leader in the society, GRM is designed to support us, the student with the all-around knowledge that important for the next generation leader.

(Chayadit Pumaneratkul)



Q2 What made you decide your current career/job?

A By visiting companies and communicating with researchers in companies, I realized that there is a wide range of opportunities for PhD holders to take an active role in private sectors, too.

(Doi Kenta)

The experience of working as an intern for 3 months in the field had a big influence in my decision to pursue a career in AI. It gave me experience of working in AI for business, which I am still finding valuable today.

(Dipak Gaire Sharma)

My current company is the biggest real estate in the world which contributes to the developing countries and poverty reduction.

(Liu Xiao)

I became interested while studying company management.

(Takagi Akuto)

A chance for Ph.D. holder to learn and grow in the field on research in private sector.

(Chayadit Pumaneratkul)

GRM alumni who actively involved in society

Questions and Answers



Q4 What is your perspective on the expanding role of a PhD holder in society in the days ahead?

A I believe that PhD holders, who have interest in a wide variety of fields and discussion skills, are highly sought after by various institutions.

(Doi Kenta)

One of the most valuable things about studying for a PhD is that you learn how to learn.

(Dipak Gaire Sharma)

I hope PhD holders can bring into play their advanced expertise, sophisticated languages and business management skill.

(Liu Xiao)

I do believe the professional work of PhD graduates can be performed efficiently as a result of their high literacy.

(Takagi Akuto)

We can start to learn and expand the knowledge to the society.

(Chayadit Pumaneratkul)

Q5 Please write a message to students who are considering whether or not to take the GRM Program.

A I strongly recommend you to take the GRM program. I think collaborative projects among GRM program alumni could emerge among various companies beyond borders.

(Doi Kenta)

It's an opportunity worth serious consideration. I'm extremely glad that I choose to take part in it.

(Dipak Gaire Sharma)

Just do it!

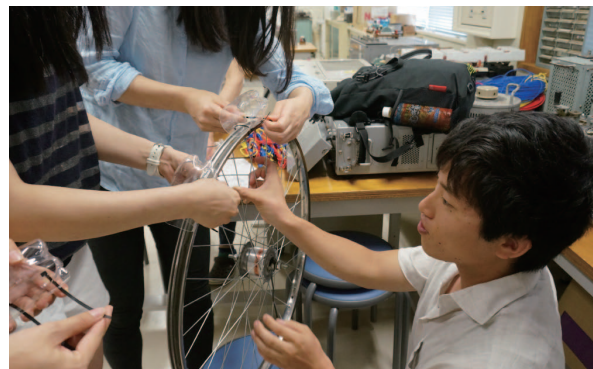
(Liu Xiao)

If you find a company or an organization you are interested in, you can do informal internships

(Takagi Akuto)

Try to challenge yourself and be a good leader for the society.

(Chayadit Pumaneratkul)



Answerer



Completed in Fall 2017
Affiliation: Graduate School of Science and Engineering
Electrical and Electronic Engineering Course

Doi Kenta

Name of employer

ULVAC, Inc.
(Major Manufacturer of Industrial Vacuum Equipment)



Completed in Fall 2017
Affiliation: Graduate School of Science and Engineering
Information and Computer Science

Dipak Gaire Sharma

Name of employer

Autonomous Control Systems Laboratory Ltd.
(Drone Manufacturer)



Completed in Fall 2017
Affiliation: Graduate School of Commerce
Commerce Course

Liu Xiao

Name of employer

Major Property Development
Company



Completed in Fall 2017
Affiliation: Graduate School of Science and Engineering
Applied Chemistry Course

Takagi Akuto

Name of employer

Planterior Co., Ltd.
(Landscape and Gardening Company)



Completed in Spring 2018
Affiliation: Graduate School of Science and Engineering
Mechanical Engineering Course

Chayadit Pumaneratkul

Name of employer

Daikin Industries (Thailand) Ltd.
(Major Manufacturer of Air Conditioning Equipment)

Tackling Issues on Co-Existence of Multiple Cultures from the Perspective of Global Resources

The goal of the Global Resource Management Program is to produce global leaders possessing a tenacious spirit and high ethical standards, who can assist emerging and developing countries, promote human security and inclusive growth, through global resource management, utilizing the knowledge from both the infrastructure science/resource and energy science and global studies.

※GRM program has been selected for the 2012 Program of Leading Graduate Schools by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). GRM has been managed for seven years from 2012 to 2018, supported by government subsidy.



The Ideal Leaders Fostered by this Program

- 1 Work and learn alongside people facing life-threatening situations, and strive to alleviate their struggles
- 2 Acquire the necessary knowledge, integrating both the natural sciences and the social sciences, to accomplish the tasks identified above
- 3 Promote religious and ethnic harmony by upholding fair, equitable and inclusive strategies based on the integrated knowledge of both the Infrastructure Science/Resource and Energy Science and Global Studies
- 4 Prevent new struggles and provide assistance for recovery and development from existing struggles with justice
- 5 Promote sustainable development and minimize wealth disparity in developing countries
- 6 Contribute to knowledge building on global resource management in Japan by documenting lessons learned in developing countries, and by forming strategic partnerships with relevant institutions and organizations in developing countries

Features of the Global Resource Management Program

1 The program will foster leaders who can tackle issues in emerging or developing countries by working alongside with the people.

The ideal leaders developed by the program will work alongside the local people and communities to gain a full appreciation and understanding of their culture and context and help them find solutions to their struggles. Through their experiences and practical knowledge, eventually, these leaders will contribute to the development of Japan and the world.



3 Students of the program will acquire knowledge integrating Science and Engineering and Global Studies, and apply them in the real world.

GRM is a doctoral program formed by integrating two of the university's well-established educational systems. They are the natural sciences and engineering sciences, specifically infrastructure science/resource and energy science, Global Studies and the educational system of humanities and social sciences related to multicultural co-existence. In order to bring about positive breakthroughs to the modern world where economic growth is stifled, the program will strive to create a new kind of infrastructure that unifies the physical, social, and spiritual dimensions.

The Importance of a Comprehensive Integration of Science, Engineering and Global Studies

Concerning the expectations of playing a leading role in nation-building as doctoral degree holders in modern society, with a single discipline alone such as humanities or social sciences, are relatively limited. The same is true for science and engineering graduates. Even a business corporation that has succeeded in expanding globally through its science and engineering expertise cannot promote multicultural harmony without appropriate strategies and management practices and consideration for social responsibility. Similarly, an expert in humanities and social sciences will not be able to contribute effectively and holistically to society without any knowledge of infrastructure science/resource and energy science which form the core of the human society. The Global Resource Management Program is a comprehensive doctoral program that provides interdisciplinary education, integrating science and engineering and global studies, emphasizing the values of equity, inclusiveness, integrity and accountability in the management of global resources. Participants of the program will gain strong support and incentives in promoting integrated multicultural societies around the world.

2 In terms of resource, consider problems in the world.

Various problems facing modern society, arise from inequalities of access to infrastructures and/or in the distribution and ownership of resources. A harmonious co-existence of multiple cultures is addressed by providing solutions which are founded on sustainable development, human security and a fair and reliable distribution of resources. The quality of research conducted in the University's Center for Interdisciplinary Study of Monotheistic Religions, is one of the highest in Japan. Based on the Center's research achievements, the program will emphasize on the co-existence with religions as one of the major strategies towards realizing a harmonious multicultural society.

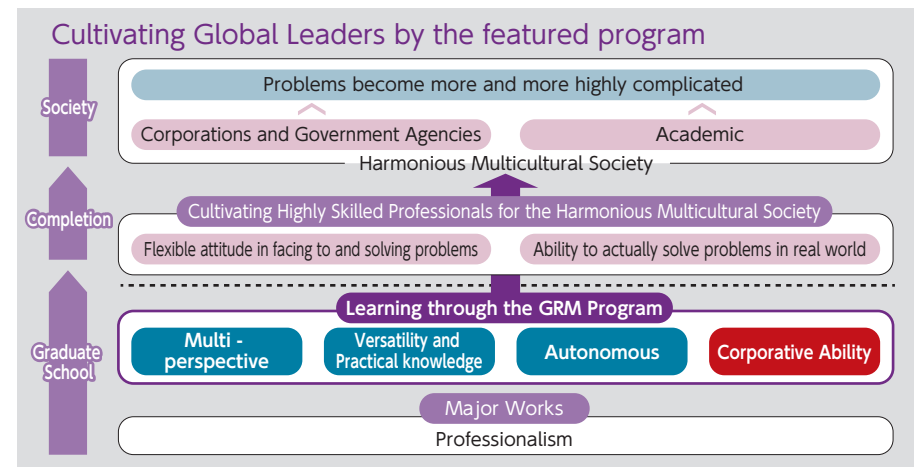
Global Resource Management

- Limits of Welfare States
- Unpredictable Catastrophes
- Limits of Modern Industrial Structure
- Wars and Disasters
- Ethnic and Religious Conflicts
- Poverty and Income Disparities

Urgent Issue : to pursue the possibilities for multicultural co-existence in the contemporary world where one cannot rely on the framework of nation-state

To solve the various problems in modern society, redistribution and development of resource/energy/infrastructure is required.

Our mission is to foster "Global Leaders" who will be able to propose and work towards solution on issues related to multicultural co-existence

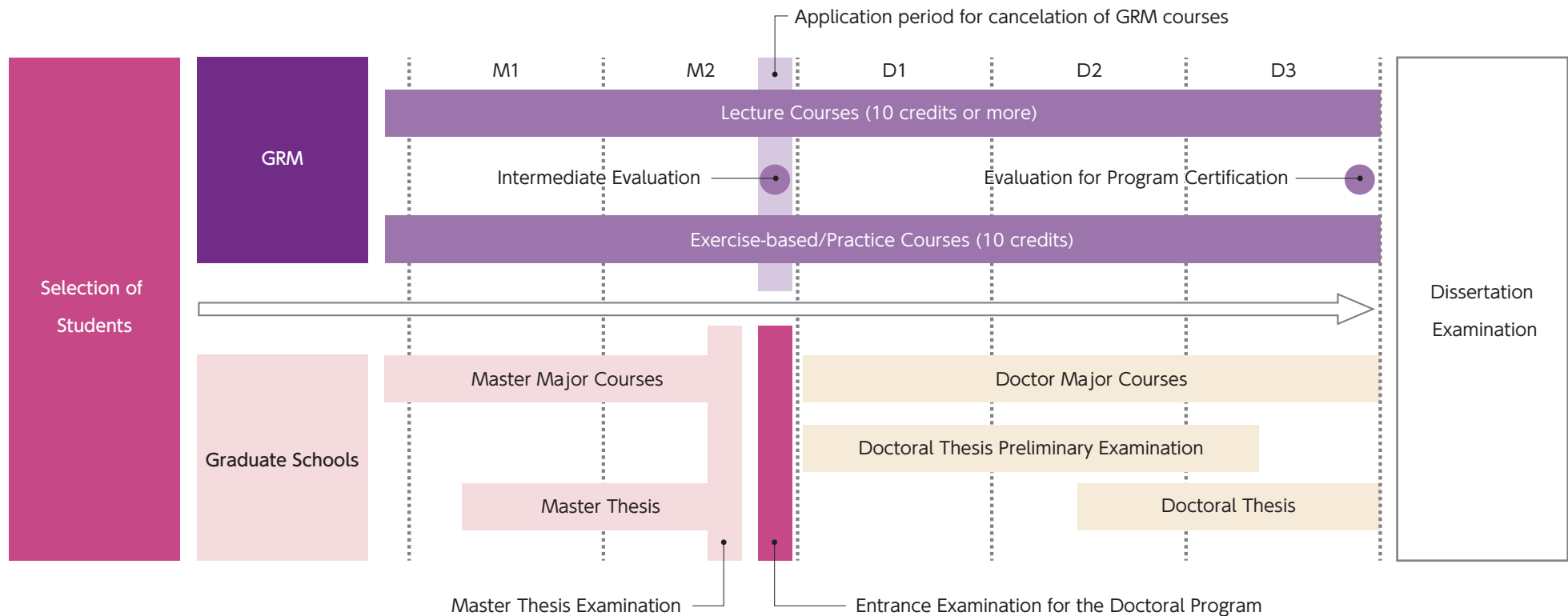


Global Resource Management Program

Overview of the GRM Program

GRM program is an additional educational program at the level of graduate school for a period of five years, combining Master's and Doctoral Degree Programs. The credits for GRM program are taken besides the credits of a respective graduate school, required for the completion of Master's Degree Program and Doctoral Degree. Students earn the credits necessary for completing GRM program (20 credits or more). Students who passed completion examination and the examination of the doctoral dissertation shall be given a certificate of "Degree in Doctor (special field specified by each graduate school)" accompanied by the completion of each graduate school and Advance Doctoral Program in Global Resource Management.

GRM program is an educational program for five years, however, not necessarily attending courses for entire five years continuously. Students are able to take a break from GRM program throughout the five-year program. For example, students are able to take Master Major Courses only. The certificate of Master Major Courses shall be issued to the students who have earned credits to complete Master Major Courses.



Global Resource Management Program

Overview of the GRM Program and Step to take GRM courses

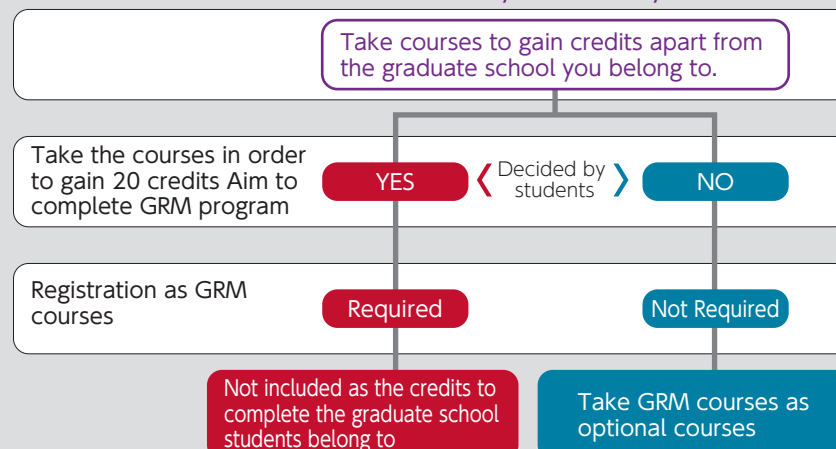
Overview of the GRM Program

- All the students of Doshisha University's Graduate Schools, except graduate schools of professional degree, are able to enroll in the GRM program without selection.
- The credits earned with the GRM courses shall NOT be counted as the credits required for the completion of Master's/Doctoral Degree Programs of the graduate school you belong to.
- **All classes are taught in English**

Step to take GRM courses

- Students who aim to complete GRM program register as a student of the GRM course from the provided system.
- Course number and prerequisite are appended on all GRM courses. GRM courses are taken according to the order under the number of courses and prerequisite. For example, course number 601 must be taken as a prerequisite in order to take course number 701 later on.
- Even Students who will not aim to complete GRM program are able to take GRM courses. Management of the credit of GRM courses shall be determined by the Graduate School you belong to.
- Students choose to aim to complete GRM program or not to in the registration to GRM program.
- Students are able to register as a student of GRM program after taking some GRM courses already. The credit which is earned until time of registering as a student of GRM Program will be counted as credits required to complete the GRM program, not counted as credit to complete the respective graduate school you belong to.

Flowchart to take GRM courses flexibly decided by students will



※Management of the credit of GRM courses shall be determined by the Graduate School you belong to.

Collaboration with Industries, Governments, and Educational Institutions around the World

Learning in GRM enabled by Industry/academia/government cooperation around the world

We provide opportunities to foster the ability to realize Co-existence of Multiple Cultures, through various activities in the real world. We have established collaboration agreements with foreign universities, corporations and international organizations around the world to provide studying abroad, internships and field work as well as inviting prominent lecturers.

Educational Institutions

University of Tehran/University of the Philippines/Kyrgyz National University
 Research Institute for Humanity and Nature/Fatih University/EHESS/Ecole Centrale
 Hasanuddin University/Middle East Technical University/Hanoi University of Science and Technology
 King Mongkut's Institute of Technology Ladkrabang/The University of Zambia
 Addis Ababa University/Polytechnique Montreal/Strathmore University/Al Jazeera Center for Studies

Global enterprise

DAIKIN INDUSTRIES, Ltd
 Country Garden Holdings Company Limited
 广汽豐田汽車有限公司
 Mitsubishi Corporation
 Mitsubishi Research Institute, Inc.
 Nissin Electric Co, Ltd
 HORIBA, Ltd.

Organizations/ Government Agencies

WB UNESCO UNDP JETRX
 JICA JETRO UNIDO IIPE
 Embassy of Japan in Slovenia
 NTSEL CRIEPI
 Japan Atomic Energy Agency
 Miyakojima city

※There are additional collaborating institutions.

Internship model to collaborated partners

- UNIDO ITPO Tokyo
- Daikin Industries (Thailand) Limited.
- HORIBA, Ltd.



The curriculum of GRM

The GRM curriculum is designed to provide a foundation for the highest level of doctoral degree holders to become more active in society. In other words, the GRM doctoral degree aims to enable defining actions and to solving problems through collaboration with others in a wide range of perspectives and ideas. It is designed in a way you can acquire the desired foundation even though if you take only the subjects designated only in the doctoral course.

Lecture Courses

Postgraduate specialization courses are increasingly diverse, and at the same time characterized in depth, compared to undergraduate courses. On the other hand, real-world problems are becoming more and more complex, thus solutions require multi-faceted perspectives and flexible thinking. In the GRM lectures, we aim to acquire such a wide range of perspectives and thinking ways by learning multifaceted views of issues, centered on "resource management" and learning problem solving methods which are different from one's specialty.

Master Program

● Resource Management for Coexistence and Cultural Diversity (GRM601)

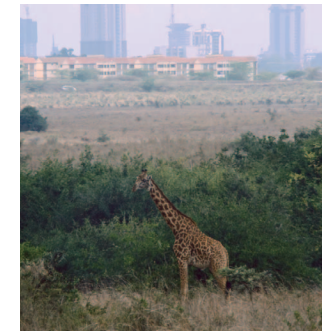
This is the first course to be taken with GRM. We share the GRM philosophy of solving various problems through appropriate development and management of resources and aiming to realize a symbiotic society. The lecture will give an idea of "resources" and explain possible problems from there.

● Capacity Development for Coexistence and Cooperative Works (GRM602)

It is a subject for acquiring basic skills for collaboration, such as dialogue, discussion, and self-expression. Furthermore, as a preliminary step, this course will include self-diagnosis to know about oneself and measurement of general abilities, attitudes and intentions required for society.

Doctoral Program

- Physics in daily life (GRM701)
- Introduction to Social Science and Humanity (GRM702)
- Introductory Infrastructure Engineering (GRM730•Humanities and Social Sciences students)
- Introductory Earth and Environment Science (GRM731•Humanities and Social Sciences students)
- Introductory Laboratory of Infrastructure Engineering (GRM732•Humanities and Social Sciences students)
- Introductory Qualitative Reserch Methods (GRM733•Science and Engineering students)
- Introductory Quantative Reserch Methods (GRM734•Science and Engineering students)
- Introductory Global Studies (GRM735•Science and Engineering students)



The curriculum of GRM

Exercise-based / Practice Courses

In society, we need to be able to act actively and to prescribe what we need to do. On the other hand, one single person can not do everything when facing complex problems. Therefore, it is necessary for a team of people with different specialties to work together and solve problems. In GRM, more often, groups work in various exercises in order to acquire the ability to work with others.

Master Program

● Group Work Practice I (GRM650)

This is a practical subject to be taken at first. Students learn how to deal with complex problems from examples, through group work. We focus on learning about various points in lectures and knowing the situation in the field through field trips.

● Group Work Practice II (GRM690)

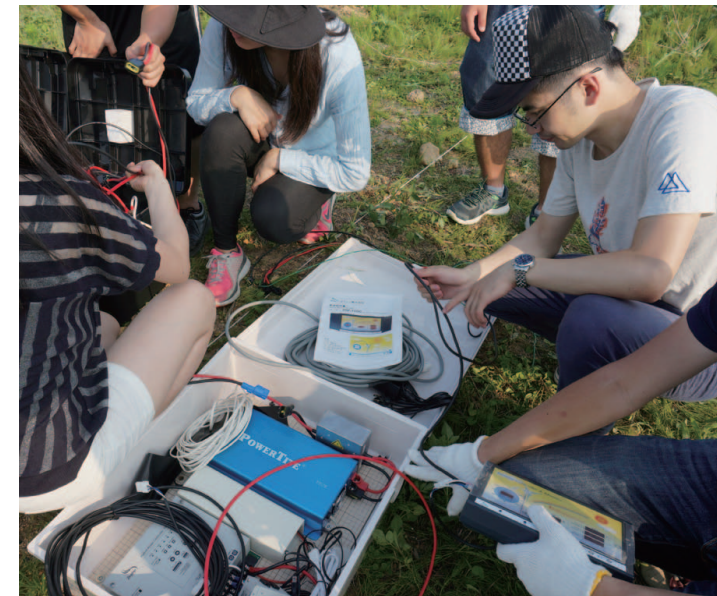
This is a course to be taken in the final semester of the master's course. Students study as a series of steps from project planning to information collection, task setting, and solution construction, through group work. This course also is subject to the check point of Intermediate Evaluation.

Doctoral Program

● Group Work Practice III (GRM750)

● Group Work Practice IV (GRM751)

● Group Work Practice V (GRM790)



Topics

Topic 1 Support for Building Career Paths

Building Career Paths and Future Courses of Action

The GRM program aims to develop human resources that can play an active part without being restricted by field or job type in addition to cultivating basic ability with versatility. We also provide guidance and support that will lead to future careers such as partly subsidizing internship expenses. In the past, we have invited GRM program alumni as guest speakers, giving them the opportunity to speak about their doctoral-degree based career paths and also to hear valuable feedback on how they made career decisions. As a perspective student with a doctoral degree, this is the place to think more deeply about employment, awareness and find the benefit in actual job placement activities. Various approaches to career path in GRM program have expanded to facilitate the choice for first career. After a student obtains a doctoral degree, regardless of the academic field, the results are highly regarded by the Ministry of Education, Culture, Sports, Science and Technology.

Careers Paths by GRM Leaders

Industry

Engineers/Managers in a global corporation, possessing skills in governance and management, are required to prevent conflicts caused by cultural frictions; advisers who can propose innovative strategies by including societies of different cultures as a potential market

Government

Public servants and government agency employees who can lead relief, development, conflict resolution, and peace-building efforts, unique to Japan with deep, practical knowledge of multicultural harmony

Education

Innovative researchers possessing the ability to provide realistic analyses of modern global issues and who can expand existing disciplines into new frontiers

International Organizations

International public servants who contribute to conflict resolution, peace-building, and recovery from disasters through strong decision-making skills and new knowledge that transcend the limits of the United Nations mediation

Employment accomplishment

- Electrical equipment manufacturers
- Minerals and metals processing company
- Multinational air conditioning manufacturers
- Property development company
- Artificial intelligence (AI) company
- Industrial drone manufacturers
- National research agency
- Measurement and analysis equipment manufacturers
- Manufactures vacuum equipment for industrial and research facilities
- Gardening company
- Teaching staff at a private university
- Medical consultant
- Researcher at a foreign university
- Independent Administrative Institution
- Assistant for exchange students at a private university
- Project Research Assistant at a private university

Topic 2 GRM Common Room

We have "GRM common rooms" on the 2nd floor of the Imadegawa Campus Shidakakan and the 1st floor of the Kyotanabe Campus Ground Visitor Hall. Both rooms are connected by an installed video conferencing system, rendering distant lectures available and to realize a co-research environment for academic / science students. Only GRM program students are eligible to enter GRM common rooms and make use of personal computers, electronic blackboards, copy machines, experimental tools and books in the rooms. The common rooms are utilized as a space for lectures, self-study and communication among students. In addition, a multipoint connection unit (MCU) is installed in the video conferencing system in the common rooms. It provides simultaneous connection to multiple sites including both on campus and off campus. Participation in a lecture, planned in advance as joint program with other universities, is possible also, such activity forms the base for promoting projects which are planned by GRM students and students from other university.



GRM extracurricular activities

GRM Program provides internship support for students who are enrolled in doctoral programs as part of their career support, so that doctoral degree holders can create and expand their careers in society. In addition, as part of the extracurricular activities, we have the opportunity to invite prominent people to speak from all over the world. There are joint projects implemented with other universities, and it is effective in personal exchange and student exchange.

Internship

Through intern training at domestic and overseas companies and international organizations, students will acquire various skills such as knowledge and networks that contribute to career decision in order to work and be active immediately in society.

■ Internship Program (example)

- Mitsubishi Corporation Belgrade Liaison Office
- Country Garden Holdings Company Limited
- Central Research Institute of Electric Power Industry
- UNIDO ITPO Tokyo
- National Agency for Automobile and Land Transport Technology
- West Japan Engineering Consultants, Inc.
- Autonomous Control Systems Laboratory Ltd.
- Daikin Industries (Thailand) Limited.
- HORIBA, Ltd

Speakers of past lectures (examples)

※Speakers' occupations as at the time of the lectures

- Ms. Sadako Ogata
(Japan International Cooperation Agency (JICA) Special Advisor to the President)
- H.E. Prof. Dr. Ahmet Davutoglu
(Former Prime Minister of the Republic of Turkey)
- Mr. Atsutoshi Nishida
(Director, Chairman of the Board, Toshiba Corporation)
- Dr. Hassine Abassi
(Secretary General, Tunisian General Labour Union/Tunisian National Dialogue Quartet)
- Hirofumi Goto
(Parliamentary Secretary, Department of Political Affairs / United Nations)



Joint courses with other universities

There are also special lectures collaborated with students from other universities, for examples, Hiroshima University, Kyushu University, Indian Institute of Technology, and Indian Management Graduate School Ahmedabad, etc.



List of GRM Courses Offered

Course Number	Course Title	Credit	Note•Prerequisite
Lecture Courses			
GRM601	Resource Management for Coexistence and Cultural Diversity	2	–
GRM602	Capacity Development for Coexistence and Cooperative Works	2	–
GRM701	Physics in daily life	2	GRM601•Only for Humanities and Social Sciences students
GRM702	Introduction to Social Science and Humanity	2	GRM601•Only for Science and Engineering students
GRM730	Introductory Infrastructure Engineering	2	GRM701•Only for Humanities and Social Sciences students
GRM731	Introductory Earth and Environment Science	2	GRM701•Only for Humanities and Social Sciences students
GRM732	Introductory Laboratory of Infrastructures	2	GRM701•Only for Humanities and Social Sciences students
GRM733	Introductory Qualitative Research Methods	2	GRM702•Only for Science and Engineering students
GRM734	Introductory Quantitative Research Methods	2	GRM702•Only for Science and Engineering students
GRM735	Introductory Global Studies	2	GRM702•Only for Science and Engineering students
Exercise-based / Practice Courses			
GRM650	Group Work Practice I	2	GRM601
GRM690	Group Work Practice II	2	GRM602
GRM750	Group Work Practice III	2	GRM690
GRM751	Group Work Practice IV	2	GRM750
GRM790	Group Work Practice V	2	GRM751

GRM courses will be taken in stages according to subject numbering, course requirements and prerequisites.

Prerequisite is a prerequisite course to take in advance. For example, course number 601 “Resource Management for Coexistence and Cultural Diversity” must be taken as a prerequisite in order to take course number 701 “Physics in daily life” later on.

MESSAGE

In order to bring about positive breakthroughs to the modern world where economic growth is stifled, a new kind of infrastructure that unifies the physical, social, and spiritual dimensions need to be created. To accomplish this, the Global Resource Management (GRM) program provides a doctoral education that integrates the University's well-established educational system on natural sciences and engineering sciences related to energy and resources with the educational system for humanities and social sciences related to co-existence of multiple cultures. From natural and engineering sciences, areas of electricity, energy, information, transportation, and water resource management will be included in the program. From humanities and social sciences, our world-renowned multi-cultural integration research program, theology, human security assurance, conflict deterrence, peace-building, development, policy science, social welfare, and other areas will be included. In particular, the program will emphasize co-existence with Islam as one of the major issues towards realizing a harmonious multi-cultural society, another unique characteristic of the program. Although the development of global leaders is part of Japan's educational policy, the image of the ideal leader developed by the GRM program is unique to our university. Our ideal leaders will not be modeled after pre-existing successful leaders, and it is certainly not the program's intent to develop monarchs and traditional leaders. Breaking the Japanese stagnation is challenging if

the focus is only within Japan where the birth rate is already significantly low. By working alongside the people in developing countries such as Indonesia, Turkey, and China with a large youth population, GRM students and graduates will directly feel the energy of these people and eventually contribute to re-energizing Japan. Ideal GRM global leaders will also gain the knowledge necessary to tackle global issues by working alongside people living in countries and regions facing extreme difficulties. Furthermore, they will also strive to formulate and implement realistic solutions. The program is planned to focus on Afghanistan, in which the University has already been involved in peace-building activities, and in the Gaza Strip, one of the most troubled countries and region in the world. As GRM students progress in the five-year doctoral program, we hope that they will consistently strive to make positive contributions as responsible global citizens. The GRM program aims at producing PhDs who can pull together knowledge from various disciplines to promote sustainable development and multi-cultural harmony.



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