Advanced Liberal Arts Course

Global Resource Management

2025

Program Guide

For students enrolled in
AY2025

同志社大学
Doshisha University

Ⅰ.What is GRM (Global Resource Management) Program?

1. Introduction

GRM program is part of the Advanced Liberal Arts Course Group* for all graduate students in both the Master's and Doctoral programs. The main feature of this program is that graduate students from diverse backgrounds and nationalities are studying together in English. There is also an environment where working professionals who are course registrants can study together.

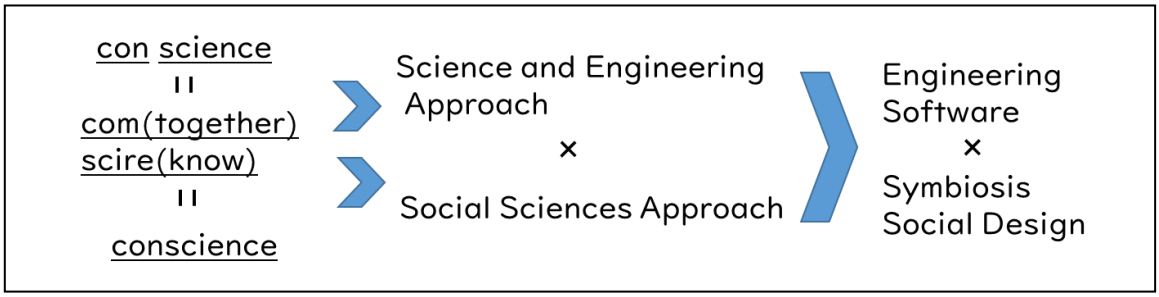
In this program, GRM defines “resources” broadly, encompassing not only natural resources but also human resources and social capital. The essence of GRM is to build and improve infrastructure as a common resource for sustainable development and peace through appropriate and fair management and operation of these “resources.”

In today's uncertain world, you may envision a future with a positive perspective, but there is also a future that can only be seen by overcoming difficult circumstances. We can learn a lot from the difficulties that the world faces and that will in turn help transform our society.

This is a program that enables students to acquire basic knowledge beyond their own fields of specialization and "advanced literacy at the graduate level", in addition to the "wisdom" to think and overcome difficulties together with others.

2. Developing Human Resources

The GRM program nurtures "Con Engineers and Innovators": who not only have the skills to apply science and make it useful in human life, but also have "Wisdom" that combines science and technology, as well as "Conscience" to support people. The technology here includes practical skills for building relationships and managing organizational projects.



3. Curriculum Policy

The GRM program is based on the principle of “designing your own study plan.” The required courses include on-site practice. Through learning in the field, students will be exposed to 'local conditions and issues' and will work in groups to develop proposals for practical problem-solving. It is recommended to take the course as early as possible to gain the experience needed to recognize the knowledge to be acquired, the abilities to

be developed, and necessary perspectives, and design your own learning plan for the future. In elective courses, students will learn a wide range of cross-field knowledge and perspectives necessary to solve problems, without distinction between the humanities and the sciences. Students can further develop their own strength or deepen their studies in their weak fields.

※Advanced Liberal Arts Course Group

The Advanced Liberal Arts (ALA) course group is a collection of courses that provides "cross -disciplinary and cross-field education", aiming to provide basic skills for graduate students from perspectives other than their specialization. This course group will develop individuals who can play an active role in modern society with "conscience" as their backbone, in accordance with the philosophy of liberal arts education. In particular, the courses aim to impart the following abilities;

- Ability to overview from a universal perspective
- Comprehensive ability to deal with issues by combining multiple specialized knowledge.
- Creative ability to interpret the future.
- Proposal ability to show the future or a conscientious human society.

You can cultivate knowledge and skills that are not confined to a specific field, and a multifaceted viewpoint to help you choose a career path or develop a career after completing graduate school.

Advanced Liberal Arts Course Group		
Global Resource Management	Next Environment Collaborative Creation	Comm 5.0 - AI and Data Science
- Acquisition of wisdom to overcome difficulties - Acquisition advanced literacy of the graduate level - Learning in English over the barriers of specialization.	- Integration of Natural Sciences and Humanities/Social Sciences. - Co-learning with working people. - Realization of innovation with a view of social implementation.	- Examining the new Communication and Community in Society 5.0. - Practicing research activities in collaboration with society. - Learn to utilize advanced information engineering technology.
conducted mainly in English	conducted in Japanese	conducted in Japanese

Ⅱ.Enrollment of GRM Program

1. Eligibility to take GRM courses

The GRM courses are open to all students of graduate schools in the master's and doctoral programs. However, each graduate school has its own regulations on the handling of GRM course credits. Check the course registration guide of each graduate school for the maximum number of credits that can be earned in this program, and whether those credits will be counted to complete the master's/doctoral programs.

2. Registration of GRM courses

You may register from a single course in this program. Register the courses on DUET during the designated course registration period each semester. On-site Group Work involves on-site practical training and is limited to approximately 10 participants. If there are many applicants, a screening process will be conducted. If you are unable to enroll due to not being selected, your registration for the On-site Group Work Introduction course, which is required to be taken concurrently, will also be canceled.

Ⅲ.Requirements for Completing GRM Program

1. Credit requirement

The number of credits required for completion of this course is 10, including 6 compulsory credits.

2. Program period

This program can be completed in one year, or it can also be completed over multiple years. Students may enroll the program in any year of the master's or doctoral program.

3. Review for the completion of the program

A survey will be conducted among GRM course enrollees regarding their desire to complete the program completion will be determined for those who wish to complete it. Eligible course completers will be informed about the issuance of an open badge, which is a digital certificate of their learning history.

Ⅳ. AY2025 GRM Program Course List （All courses can be registered from M1）

Elective/ Compulsory	Course Code	Class	Course Name	Instructor(s) Main Instructor	Credit	Semester	Campus
Compulsory	35650600	000	On-site Group Work Introduction	Yuko ONISHI	2	S Intensive	I
	35650601	000	On-site Group Work	Yuko ONISHI	2	S Intensive	I
	35650651	000	Seminar for Advanced Liberal Arts	Yuko ONISHI Masanori NAITO	2	F Intensive	I
【Elective】 2 courses required	35650611	000	Resource Management for Coexistence and Cultural Diversity	Eiji OYAMADA Minoru INABA Naoto NAGAOKA Jiro SENDA Takashi YAGI Shinichiro HAMA Yuko ONISHI	2	S	Real-time Online
	35650621	000	Mathematics and Physics as Liberal Arts	Camille-faith PASCUA ROMERO	2	S	Real-time Online
	35650622	000	Infrastructure Design for Human Communities	Camille-faith PASCUA ROMERO	2	F	Real-time Online
	35650623	000	Environmental Earth Science as Liberal Arts	Yuko ONISHI	2	F Intensive	I
	35650624	000	Global Resource Management: Interdisciplinary Approach 1 -Climate Change-	Yuko ONISHI	2	S Intensive	Real-time Online
	35650634	000	Global Resource Management: Interdisciplinary Approach 2 -Cocreation and Transdisciplinary-	Yuko ONISHI	2	F Intensive	Reaal-time Online
	35650625	000	Global Resource Management and Sustainable Development Goals1	Yuko ONISHI	2	S	I
	35650635	000	Global Resource Management and Sustainable Development Goals 2	Yuko ONISHI	2	F	I
	35650631	000	Global Resource Management and International Relations	Seifudein ADEM	2	S	Real-time Online
	35650632	000	Research Methods of Social Sciences	Seifudein ADEM	2	F	Real-time Online
	35650633	000	Global Society in the Modern World	Eiji OYAMADA	2	F Intensive	I
	35650641	000	GRM Topics 1 -Natural Hazards and Disaster Management-	Anna MATSUKAWA	2	S Intensive	I
	35650642	000	GRM Topics 2 -Topics in Mathematics for Information and Data Sciences-	Takeshi TOKUYAMA	2	S Intensive	I
	35650643	000	Capacity Development for Coexistence and Cooperative Works	Mitsuaki UEDA	2	S Intensive	I
	35650644	000	Introductory Laboratory of Infrastructures	Yoki IKEDA	2	S	T

- GRM courses will be conducted in English, but considering the language proficiency of the students, some parts may be conducted in Japanese.

- Due to the balance of the school locations of the enrolled students, there may be a possibility of changing the campus.

- For courses conducted in classrooms other than intensive courses, please check the syllabus for the availability of on-demand classes (such as Do Week in the first week). If there are no on-demand classes, the course instructor will set a separate schedule.

- On-site Group Work must be taken concurrently with On-site Group Work Introduction."

- Only the course 'Introductory Laboratory of Infrastructures' is 4 hours per week. All other courses are 2 hours per week.

V. Overview of AY2025 GRM Program Courses

On-site Group Introduction	The "On-site Group Work" course provides students opportunities to study abroad and examine various sustainability issues from multidimensional perspectives. This course provides an introduction to the "On-site Group Work" course and is composed of a series of lectures and students' activities, which are designed to enable students to prepare themselves for the field study. Students will examine the region that they will visit from technological, scientific, cultural, and policy perspectives. The details about the region and the students' assignments will be announced at the first lecture. As the students from different campuses are expected to join, this course is offered mostly online. However, there are three days (afternoons) that the students are expected to meet face-to-face.

On-site Group Work	We are currently facing a significant and complex global resource crisis, to which effective solutions are urgently sought at from international to local levels, by integrating all relevant knowledge, expertise, interests, and aspirations through interdisciplinary and transdisciplinary collaboration. This course, offered as a compulsory component for the Global Resource Management Program, provides the students with hands-on experience of interdisciplinary and transdisciplinary collaboration to examine key sustainability challenges at multi-levels and from multidimensional perspectives. Students with different expertise and experience will exchange ideas and implement a group project with practitioners (i.e. workers in the private company). The course consists of a field trip and a final presentation. The field trip includes visits to foreign universities, international and public institutions, and private companies, where students learn and discuss about recent research and actions/measures from technological, scientific, cultural, and policy perspectives. The theme for 2025 is: Addressing sustainability challenges through interdisciplinary and participatory approach. This course must be undertaken in conjunction with the course: On-site Group Work Introduction. The details of the field trip will be announced at the first lecture of "On-site Group Work Introduction". This course is supported by Daikin Industries Ltd.

Seminar for Advanced Liberal Arts	This seminar presents contemporary issues surrounding our society and explores how to solve them. The seminar consists of a series of lectures by distinguished visiting professors. The guest lecturers are individuals who have been active at the forefront of the world for many years, such as ex-diplomat and officers at international organizations. Through discussions with them, students will acquire the literacy and broad perspective to understand what is happening in the "current" world. The seminar is available for graduate students in any disciplines. A wide range of the topics are covered in the lectures such as international security, nuclear powers, conflicts in the Middle East, and global environmental issues.

Resource Management for Coexistence and Cultural Diversity	In this course, students will learn the interpretation of “resource” and how we can translate problems with this concept. Lectures will be delivered by all different professors in each time and explain how the concept of “resource” can be adapted in each field. Lectures will also explain how the proper management of “resources” could contribute to solve problems of their field. The course is delivered with the relayed lecture style in order to cover wide range of topics: both social and natural science.

Mathematics and Physics as Liberal Arts	The course aims at giving students enough knowledge in physics to understand artificial social infrastructure and natural environment. It puts particular emphasis on electrical energy explaining how electrical power is generated, transported, distributed and utilized by people. Demonstration employing small scale models of electrical generators, fluid machines and motors should enhance students’ understanding of energy conversion. Simple mathematical formulations of fundamental physics rules are given, but the course does not necessarily require high mathematical skills and abilities of students.

Infrastructure Design for Human Communities	Infrastructure is the foundation of any kind of activities of human community. Knowledge on how these components of infrastructure are integrated provides a viewpoint indispensable to make further study on resource management for non-engineering major graduate students. As a basic level course, this course puts more emphasis on how to understand the logics and basic methodologies required for planning and designing of infrastructures, rather than obtaining individual knowledge. The course puts more emphasis on actually solving problems, rather than just memorizing formulae, for a student to obtain some idea of thinking as an engineer.

Environmental Earth Science as Liberal Arts	This course introduces graduate students, regardless of their background, to scientific perspectives on environmental systems of the earth. It will cover fundamental and important concepts in understanding the processes shaping the Earth and affecting its resources, in particular, the climate, surface, and biological processes. It will take a closer look at functioning and variations of biological resources through field observations in the Kyoto Botanical Garden.

Global Resource Management: Interdisciplinary Approach I -Climate Change-	The global climate is changing and urgent actions are needed to prevent us from the unexpected disasters and harmful impacts. The course will first look at how the climate has been changing and why this has been happening. It will then examine various impacts and measures being taken to address climate change.

Global Resource Management: Interdisciplinary Approach 2 -Cocreation and Transdisciplinary-	Our society faces various global resource crisis, which is difficult to be solved because a wide range of people are involved in various ways and have different interests. To address the issue, it is important that the stakeholders collaborate together and work out effective and appropriate solutions. However, collaboration among people with different backgrounds and interests is often a great challenge as we don't normally meet and work with others working/studying in different expertise/disciplines. In this course, students will develop skills for interdisciplinary collaboration by learning about the theories and case studies and through group discussions.

Global Resource Management and Sustainable Development Goals I	The Sustainable Development Goals were adopted by the United Nations in 2015, which include 17 goals encompassing natural, social, and economic sectors. This course introduces various topics related to SDGs on natural resources, which are considered as a basis for social and economic goals. It is structured as an interdisciplinary course, with lectures consisting of scientific backgrounds to the problem, the past and current status of the situation, and international/national responses (e.g. Policies, legislations, assessments.)

Global Resource Management and Sustainable Development Goals2	The Sustainable Development Goals were adopted by the United Nations in 2015, which include 17 goals encompassing natural, social, and economic sectors. This course aims at consolidating students' knowledge on SDGs and building their capacity to deliver their learning. Students will undertake activities facilitated by the course lecturer, through with they will develop ideas for achieving SDGs. Students from any countries and disciplines are welcome and they will be exchanging their knowledge and experience on the issues related to SDGs. They will also work on the group project, which will be presented in a local SDGs event in northern Kyoto.

Global Resource Management and International Relations	This course reviews contending theories of International Relations (IR) by scrutinizing the basic concepts of each theory, its core, and auxiliary propositions, and its underlying assumptions. The course also applies each theory to contemporary history.

Research Methods of Social Sciences	Theoretical perspectives about the social sciences had for long viewed cultures and civilizations through a vertical divide–as stratified and hierarchical. Culture had been thus marginalized as an important variable for understanding relations between societies. We join the growing intellectual trend by highlighting the relevance of cultural forces for a deeper understanding of the dynamics within societies and the relationships among them.

Global Society in the Modern World	This course will look at the global issues of today (gap between the rich and poor, migration across national borders, religious and cultural coexistence, refugees, human security and others), examine the causes and impact of these issues, and find possible measures. Furthermore, in-depth understanding on key perspectives needed in the study of global issues will be gained. While developing knowledge through actual case studies and insights from practitioners, analysis of corrective measures will be done.

GRM Topics I -Natural Hazards and Disaster Management-	Disasters are social phenomena, and the magnitude of the damage and the process of recovery and reconstruction resulting from them are influenced by the vulnerability of society, pre-disaster measures taken by society and legal systems, and the response during disaster occurrence. This lecture aims to examine the current state of disaster-related legislation in Japan and disaster preparedness and response based on it, using recent examples and issues from disasters.

GRM Topics 2 –Topics in Mathematics for Information and Data Sciences–	Learn how mathematics is used to develop information technology and data science. The lecturer will talk his own experiences in his career, give some puzzles, and solve problems together in the class to understand how mathematics is useful in real life. Mathematical knowledge is not required, but students are suggested to study (say, search Wikipedia) about the topics given in the lectures after each lecture to have deeper understanding. Students are requested to write short report of their study.

Capacity Development for Coexistence and Cooperative Works	This course is designed to design their own career paths in the globalized world, and obtain necessary skills which might be needed when searching jobs. Besides the lectures which will be given by the lecturer who is in charge of this class, there will be guest speakers and trainers. The guests will talk about not only their first hand work experiences, but also share their personal insights about how PhD students could make best use of their time in university in terms of career path and how they can design their own career.

Introductory Laboratory of Infrastructures	A knowledge and technics about an electrical construction, a plumbing construction, and road construction are useful to engage for some work such as a restoration of infrastructures and a construction of life line at a country with insufficient infrastructure, such as disaster-stricken areas or conflict areas. In the class, learn about the tools and equipment which can be use in individual level, and the basics of electrical construction, by experiment using actual equipment.

Ⅵ.Others

◆ GRM Common Rooms

GRM Common Rooms, one located on the second floor of Shikokan building at Karasuma Campus and another one on the first floor of Hochikan building at Kyotanabe Campus, are open to the GRM students to improve students' learning environment. The two common rooms are connected online to enable students to remotely take lectures offered at the other campus. In addition, the GRM students can use laptop computers and A4 printers (black and white) in the common rooms.

Please note the following points when using the Common Rooms.

- Student ID card is required to enter the Common Rooms.
- The Common Rooms are open from 9:00 to 17:00, Monday through Friday during the office hours.
- When classes or lectures are held in the Common Rooms, you cannot use the Common Rooms personally.
- Eating and drinking are prohibited in the Common Rooms for the purpose of equipment maintenance.

※If you have any questions, please contact the Office of the Institute for Advanced Research and Education.

Class Table 2025 Spring Semester

GRM Class Table 2025 Spring

SKCMR: Shikokan Common Room, HCCMR: Hochikan Common Room

	Mon	Tue	Wed		Thu	Fri	Sat
1st	Global Resource Management and International Relations						
	Adem						
	Real-time Online						
2nd		GRM and Sustainable Development Goals I			Mathematics and Pysics as Liberal Arts		Resource Management
		Onishi			Romero		Oyamada & Others
		SKCMR@Imadegawa			Real-time Online		Real-time Online
3rd			<Intensive> On-site Group Work introduction		<Intensive> GRM: Interdisciplinary Approach I		<Intensive> Capacity Development for Coexistence and Cooperative Works
4th				Introductory Laboratory of Infrastructures (※ Every Week)			
			Onishi		Onishi		Ueda
			SKCMR@Imadegawa		Reeal-time Online		Imadegawa@SKCMR
5th							
				Ikeda			
				HCCMR@Kyotanabe			

<Intensive>

On-site Group Work Introduction	On-site Group Work	GRM Topics 1-Natural Hazards and Disaster Management	GRM Topics 2-Topics in Mathematics for Information	GRM Interdisciplinary Approach I	Capacity Development for Coexistence and Cooperative Works
Onishi	Onishi	Matsukawa	Tokuyama	Onishi	Ueda
Imadegawa	Imadegawa	Imadegawa	Imadegawa	Real-time Online	Imadegawa@SKCMR
Wednesday 3-4 *Check the syllabus for the schedule	To be announced	August 4,5,6,	July 29,30,31,	Thursday 3-4 *Check the syllabus for the schedule	4/12(Sat) 3-4 4/26(Sat) 3-4 5/17(Sat) 3-4 5/31(Sat) 3-4 6/14(Sat) 3-4 6/28(Sat) 3-4 7/12(Sat) 3

※Please check the Please check DUET or the website for the latest information.

Class Table 2025 Fall Semester

GRM Class Table 2025 Fall

SKCMR: Shikokan Common Room, HCCMR: Hochikan Common Room

	Mon	Tue	Wed	Thu	Fri	Sat
1st						
2nd		GRM and Sustainable Development Goals 2 Onishi SKCMR@Imadegawa			Infrastructure Design for Human Communities Romero Real-time Online	
3rd				<Intensive> GRM: Interdisciplinary Approach 2	<Intensive> Environmental Earth Science as Liberal Arts	
4th			<Intensive> Seminar for Advanced Liberal Arts	Onishi Real-time Online	Onishi SKCMR@Imadegawa	
5th			Onishi / Naito SKCMR@Imadegawa			
6th		Research Methods of Social Sciences Adem Real-time Online				

<Intensive>

Seminar for Advanced Liberal Arts	GRM: Interdisciiplinary Approach 2	Global Society in the Modern World	Environmental Earth Science as Liberal Arts
Onishi/Naito	Onishi	Oyamada	Onishi
Imadegawa	Real-time Online	Imadegawa	Imadegawa
Wednesday 4-5 *Check the syllabus for the schedule	Thursday 3-4 *Check the syllabus for the schedule	To be announced	Friday 3-4 *Check the syllabus for the schedule

※Please check the Please check DUET or the website for the latest information.

<Contact Information >

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