Course guide:
Course for the development of global human resources in multidisciplinary sciences of mathematics and physics
(Provisional translation)

（1）Curriculum

Ph.D course : 10 students for each grade

Master course: 3 second year students

Requirements for completing the course

More than 15 credits	Compulsory lectures in this course 4 credits	①Research in Interdisciplinary Field A: 1 credit (Compulsory) ②Research in Interdisciplinary Field B: 1 credit (Compulsory) ③Overseas training: 1 credit (Compulsory) ④International Presentation: 1 credit (Compulsory)
	More than or equal to 11 credits from lectures in the division to which a student belongs	
Pass a final examination for this course		
Publish research paper(s), including a substantial part of the Ph.D. thesis, in a peer-reviewed journal edited in English (or another European language).		
Pass an examination of the Ph.D. thesis		

(note) ①In Research in Interdisciplinary Field (A and B), the laboratory where the student conducts research is different from the one to which he/she belongs. In Research in Interdisciplinary Field A, this course introduces a laboratory which is related to Institute for Frontier Science Initiative. In Research in Interdisciplinary Field B, a student conducts research in another laboratory in Japan or another country. The travel fee for overseas training is supported.

（2）Model cases

Case 1：A student carries out items 1, 2, and 3.

Case 2：A student carries out items 1, 3, 4, and 5.

1. Laboratory rotation related to the Institute for Frontier Science Initiative.

A student experiences research in a laboratory which is related to Institute for Frontiers Science Initiative in a short term. He/She conducts research in a field which is different from his/her major to gain a wider perspective and the ability to apply mathematical and physical sciences to related fields. [Research in Interdisciplinary Field A]

2. Laboratory rotation: study abroad

A student stays for about one month in an overseas laboratory and conducts research which is related to the study in the major field. The main purpose is to develop ability of overseas research and is not to develop skills of English [Research

in Interdisciplinary Field B and Overseas training].

３. Presentation at an international conference

A student gives a presentation at an international conference held in Japan or overseas [International Presentation].

４. Laboratory rotation in Japan (university or research institute)

The purpose of this lecture is to develop research ability in the field of multidisciplinary sciences of mathematics and physics. A student conducts research in a field which is different from his/her major to gain a wider perspective and the ability to apply mathematical and physical sciences to related fields [Research in Interdisciplinary Field B].

５. Attending an international conference held in a foreign country or an overseas short-term program such as a summer school [Overseas training].