Degree to be obtained: Bachelor of Science

2. Overview

Among the fields of science, mathematics is the subject for which standardization and systematization are the most advanced. The Mathematics Program at Hiroshima University mainly aims to educate students to understand and rigorously learn the essence of basic theories in the fields of modern mathematics such as algebra, geometry, and analysis. Through this process, students develop an in-depth ability to comprehend complex phenomena from a mathematical point of view in order to generalize, abstract, systematize, and model these phenomena. Students are also enabled to improve their abilities in logical thinking and representation in order to establish a foundation for their future. The abilities described above are required for identifying, formulating, and solving the various problems that appear in all areas of society. We also aim to educate students through carefully supervised independent study in order to produce professionals who are capable of making autonomous decisions based on concrete evidence and able to work in various fields while adapting to change and newly-emerging factors. We hope to create researchers who will contribute to the evolution of mathematical science in the future, educators who understand the essence and academic meaning of modern science, and professionals who have sophisticated mathematical thinking abilities and the creativity required to meet the needs of an information-intensive society. Mastery of basic academic skills and advanced knowledge is expected upon completion of the course.

A great deal of importance will be attached to the continuity of education from the undergraduate to the graduate school. Students can advance to the Mathematics Program in the Division of Advanced Science and Engineering in the Graduate School of Advanced Science and Engineering or to the Program of Mathematical and Life Sciences in the Division of Integrated Sciences for Life in the Graduate School of Integrated Sciences for Life.

Subjects are arranged clearly and hierarchically into liberal arts subjects and specialized education subjects (specialized basic subjects and specialized subjects). Globally standardized lessons are provided for achievement in this program is considered to be an achievement of the global standard. In the 3rd year, lessons that enable students to acquire the knowledge and skills required for exploring the cutting edge of the field that they have chosen will be provided. Because of these lessons, students will be able comprehend and enjoy specialized lectures in the Department of Mathematics and benefit from a bachelor's course in which a great deal of importance is given to the

identify and solve problems, think logically, give presentations and be more creative.

Academic achievement is evaluated based on grades/scores and performance.

5. Start time and acceptance conditions

In the School of Science, each department holds entrance examinations and stipulates the requirement for admission to the department in its application guidelines. This program is designed mainly for students of the Department of Mathematics. Students will take this program when they enter our department.

This program also accepts all students who have already been accepted to this university. Requirements for students who wish to join the Department of Mathematics are stipulated separately based on the provisions regarding transfer between schools or departments.

6. Obtainable qualifications

Type 1 license for junior high school Mathematics teachers. Type 1 license for senior high school Mathematics, Curator license, certification for Assistant Registered Surveyors, qualification for joining the Skill Training course for health controllers in Health Engineering.

7. Class subjects and their contents

* For the class subjects, refer to the subject table in Attachment 1.

* For the details of the class subjects, refer to the syllabus that is published for each academic year.

8. Academic achievement

The evaluation criteria are specified for each academic achievement item, and the achievement level against these criteria is

A booklet entitled "After Completing Lectures" is delivered to faculty members and students after the semester ends to notify them about any updated information concerning course curriculum.

Type	Subject type	Required No. of credits	Class subjects, etc.	No. of credits	Type of course registration	Year in which the subject is taken (*The lower figure means semester) Note 1							
						1st grade		2nd grade		3rd grade		4th grade	
						Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
						1	2	3	4	5	6	7	8
	Peace Science Courses	2	From "Peace Science Courses"	Each 2	Elective/required								
Basic Courses in University Education	Introduction to University Education	2	Introduction to University Education	2	Required								
	Introductory Seminar for First-Year Students	2	Introductory Seminar for First-Year Students	2	Required								
		(0)		1	Free elective								
	Area Courses			1 or 2	Elective/required								
	Foreign Languages: Basic English Usage	(0)	Basic English Usage I	1	Free elective								
			Basic English Usage II	1									
	Foreign Languages: Communication I	2		1	Required								
				1									
	Foreign Languages: Communication II	2		1	Required								
				1									
	Foreign Languages		Foreign Languages: Basic Studies I	1	Elective/required								
				1									
				1									
				1									
	Information and Data Science Courses	2	Introduction to Information and Data Sciences	2	Required								
		2	Computer Programming	2	Elective/required								
			Intelligence and Computer	2									
			Starting Programming from Scratch	2									
			Fundamental Date Science	2									
	Health and Sports Courses	2	From "Health and Sports Courses"	1 or 2	Elective/required								
		(0)	From "Social Cooperation Courses"	1 or 2	Free elective								
	Foundation Courses			2	Required								
				1									
				2									
				1									

Academic achievements	Evaluation criteria		
Evaluation items	Excellent	Very Good	Good
(3) To acquire the ability to understand sentences and communicate information.	1. The ability to listen to others opinions carefully and to make logical statements. 2. The ability to read, appropriately integrate and write down necessary documents. 3. The ability to clearly make verbal or paper announcement on intricate information. 4.The ability to send out information with information technology.	Having two abilities among following ones. 1. the ability of listening carefully and making logical statement. 2. the ability of reading necessary papers and appropriately summing up. 3. the ability of clearly presenting intricate information	

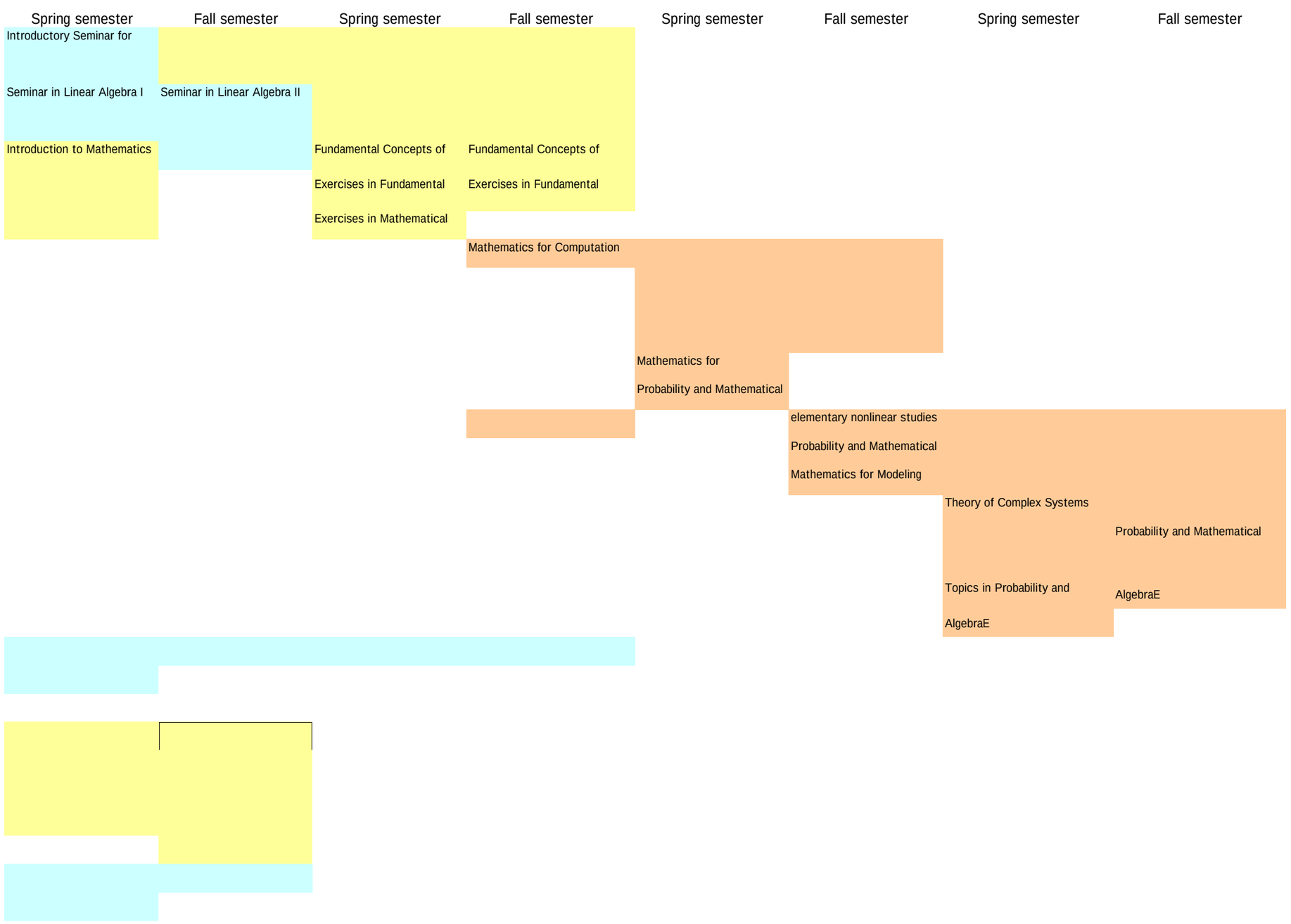
Sheet

Subject Classification	Subject Name	Credits	Type of course registration	Grade	Evaluation items																														Total weighted values of evaluation items in the
					Knowledge and Understanding												Abilities and Skills										Comprehensive Abilities										
					(1)		(2)		(3)		(4)		(5)		(6)		(1)		(2)		(3)		(4)		(5)		(1)		(2)		(3)		(4)		(5)		
	Basic Studies																																		
	Basic Studies																																		
	Basic Studies																																		
					1 2																						100	1									100
Liberal Arts Education	Social Cooperation Courses	0	Free elective	1 2											100	1																				100
Liberal Arts Education	Linear Algebra	2	Required	1	100	1																														100
Liberal Arts Education	Seminar in Linear Algebra	1	Required	1	100	1																														100
Liberal Arts Education	Linear Algebra	2	Required	2	100	1																														100
Liberal Arts Education	Seminar in Linear Algebra	1	Required	2	100	1																														100
Specialized Education	Introduction to Mathematics	2	Required	1	100	1																														100
Specialized Education	Introduction to Information Mathematics	2	Elective/ required	2									100	1																						100
Specialized Education	Introduction to Physics A	2	Elective/ required	1									100	1																						100
Specialized Education	Introduction to Physics B	2	Elective/ required	2									100	1																						100
Specialized Education	Introduction to Chemistry A	2	Elective/ required	1									100	1																						100
Specialized Education	Introduction to Chemistry B	2	Elective/ required	2									100	1																						100
Specialized Education	Introduction to Biological Sciences A	2	Elective/ required	1									100	1																						100
Specialized Education	Introduction to Biological Sciences B	2	Elective/ required	2									100	1																						100
Specialized Education	Introduction to Earth and Planetary Sciences	2	Elective/ required	1									100	1																						100
Specialized Education	Introduction to Earth and Planetary Sciences	2	Elective/ required	2									100	1																						100
Specialized Education	English Seminar on Mathematics	1	Elective/ required	4																					100	1										100
Specialized Education	Analysis I	2	Required	1	50	1											50	1																		100
Specialized Education	Exercises in Algebra I	1	Required	1	50	1											50	1																		100
Specialized Education	Analysis II	2	Required	2	50	1											50	1																		100

Subject Classification	Subject Name	Credits	Type of course registration	Grade	Evaluation items																														Total weighted values of evaluation items in the
					Knowledge and Understanding												Abilities and Skills										Comprehensive Abilities										
					(1)		(2)		(3)		(4)		(5)		(6)		(1)		(2)		(3)		(4)		(5)		(1)		(2)		(3)		(4)		(5)		
					Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	
Specialized Education	Exercises in Algebra II	1	Required	2	50	1											50	1																		100
Specialized Education	Analysis III	2	Required	3	50	1											50	1																		100
Specialized Education	Exercises in Algebra III	1	Required	3	50	1											50	1																		100
Specialized Education	Analysis IV	2	Required	4	50	1											50	1																		100
Specialized Education	Exercises in Algebra IV	1	Required	4	50	1											50	1																		100
Specialized Education	Algebra I	2	Required	3	50	1											50	1																		100
Specialized Education	Exercises in Algebra I	1	Required	3	50	1											50	1																		100
Specialized Education	Algebra II	2	Required	4	50	1											50	1																		100
Specialized Education	Exercises in Algebra II	1	Required	4	50	1											50	1																		100
Specialized Education	Fundamental Concepts of Mathematics I	2	Required	3	50	1											50	1																		100
Specialized Education	Exercises in Fundamental Concepts	1	Required	3	50	1											50	1																		100
Specialized Education	Fundamental Concepts of Mathematics II	2	Required	4	50	1											50	1																		100
Specialized Education	Exercises in Fundamental Concepts	1	Required	4	50	1											50	1																		100
Specialized Education	Exercises in Mathematical Software	2	Required	3	50	1															50	1														100
Specialized Education	Special Study of Mathematics and Informatics for Graduation	5	Required	7 8													10	1	10	1	10	1					14	1	14	1	14	1	14	1	14	1	100
Specialized Education	Algebra	2	Elective/ required	5			50	1									50	1																		100
Specialized Education	Exercises in Algebra	2	Elective/ required	5													50	1	50	1																100
Specialized Education	Algebra	2	Elective/ required	6			50	1									50	1																		100
Specialized Education	Exercises in Algebra	2	Elective/ required	6													50	1	50	1																100
Specialized Education	Geometry	2	Elective/ required	5			50	1									50	1																		100
Specialized Education	Exercises in Geometry	2	Elective/ required	5													50	1	50	1																100
Specialized Education	Geometry	2	Elective/ required	6			50	1									50	1																		100
Specialized Education	Exercises in Geometry	2	Elective/ required	6													50	1	50	1																100
Specialized Education	Analysis	2	Elective/ required	5			50	1									50	1																		100
Specialized Education	Exercises in Algebra	2	Elective/ required	5													50	1	50	1																100
Specialized Education	Analysis	2	Elective/ required	5			50	1									50	1																		100
Specialized Education	Exercises in Algebra	2	Elective/ required	5													50	1	50	1																100
Specialized Education	Analysis	2	Elective/ required	6			50	1									50	1																		100
Specialized Education	Exercises in Algebra	2	Elective/ required	6													50	1	50	1																100
Specialized Education	Analysis	2	Elective/ required	6			50	1									50	1																		100
Specialized Education	Exercises in Algebra	2	Elective/ required	6													50	1	50	1																100
Specialized Education	Mathematics for Computation	2	Elective/ required	4			50	1									50	1																		100
Specialized Education	Exercises in Mathematics for	2	Elective/ required	4															50	1	50	1														100
Specialized Education	Mathematics for Computation	2	Elective/ required	5			50	1									50	1																		100
Specialized Education	Exercises in Mathematics for	2	Elective/ required	5															50	1	50	1														100
Specialized Education	Probability and Mathematical Statistics	2	Elective/ required	5			50	1									50	1																		100
Specialized Education	Exercises in Probability and Mathematical	2	Elective/ required	5													50	1	50	1																100
Specialized Education	Algebra	2	Free elective	7					100	1																										100
Specialized Education	Algebra	2	Free elective	8					100	1																										100
Specialized Education	Geometry	2	Free elective	7					100	1																										100
Specialized Education	Geometry	2	Free elective	8					100	1																										100

Subject Classification	Subject Name	Credits	Type of course registration	Grade	Evaluation items																														Total weighted values of evaluation items in the
					Knowledge and Understanding												Abilities and Skills										Comprehensive Abilities										
					(1)		(2)		(3)		(4)		(5)		(6)		(1)		(2)		(3)		(4)		(5)		(1)		(2)		(3)		(4)		(5)		
					Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	
Specialized Education	Elementary nonlinear studies	2	Free elective	6					100	1																										100
Specialized Education	Mathematical Analysis	2	Free elective	7					100	1																										100
Specialized Education	Mathematical Analysis	2	Free elective	8					100	1																										100
Specialized Education	Probability and Mathematical Statistics	2	Free elective	6					100	1																										100
Specialized Education	Probability and Mathematical Statistics	2	Free elective	8					100	1																										100
Specialized Education	Data Science	2	Free elective	4					50	1											50	1														100
Specialized Education	Algebra	2	Free elective	7 8					50	1											50	1														100
Specialized Education	Mathematics for Modeling and Simulation	2	Free elective	6					50	1											50	1														100
Specialized Education	Theory of Complex Systems	2	Free elective	7					50	1											50	1														100
Specialized Education	Mathematics for Computation	2	Free elective	8					50	1											50	1														100
Specialized Education	Mathematics Internship	1	Free elective	5																	100	1														100
Specialized Education	Topics in Mathematics	2	Free elective	7 8					100	1																										100

Sheet4


Spring semester
Fall semester
Spring semester
Fall semester
Spring semester
Fall semester
Spring semester
Fall semester
Introductory Seminar for
Seminar in Linear Algebra I
Seminar in Linear Algebra II
Introduction to Mathematics
Fundamental Concepts of
Exercises in Fundamental
Exercises in Mathematical
Fundamental Concepts of
Exercises in Fundamental
Mathematics for Computation
Mathematics for
Probability and Mathematical
elementary nonlinear studies
Probability and Mathematical
Mathematics for Modeling
Theory of Complex Systems
Probability and Mathematical
Topics in Probability and
AlgebraE
AlgebraE

Academic achievements Evaluation items		1st grade		2nd grade		3rd grade		4th grade	
		Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester
Abilities and Skills	To acquire basic mathematical abilities (Ability to understand concepts, calculation ability, argumentation ability).							Special Study of Mathematics and Informatics for Graduation	Special Study of Mathematics and Informatics for Graduation
						Exercises in Geometry A	Exercises in Geometry B		
				Fundamental Concepts of	Fundamental Concepts of				
				Exercises in Fundamental	Exercises in Fundamental				
					Mathematics for Computation				
						Mathematics for			
						Probability and Mathematical			
						Exercises in Probability and Mathematical Statistics A			
	To acquire skills to formulate and solve mathematical questions.				Exercises in Mathematics for			Special Study of Mathematics and Informatics for Graduation	Special Study of Mathematics and Informatics for Graduation
						Exercises in Geometry A	Exercises in Geometry B		
						Exercises in Mathematics for			
						Exercises in Probability and Mathematical Statistics A			
Abilities and Skills	To learn basic knowledge, skills, and attitudes related to information. Based on them, to be able to process, output and input information, as well as to utilize information appropriately.	Introduction to Information	Intelligence and Computer	Exercises in Mathematical	Exercises in Mathematics for	Exercises in Mathematics for	Mathematics for Modeling	Special Study of Mathematics and Informatics for Graduation	Special Study of Mathematics and Informatics for Graduation
			Starting Programming from					Theory of Complex Systems	Mathematics for Computation B
			Fundamental Date Science					AlgebraE	AlgebraE
	Being able to conduct daily communication orally or in papers using foreign languages.								
		Foreign Languages: Basic	Foreign Languages: Basic						
		Foreign Languages: Basic	Foreign Languages: Basic						
					English Seminar on				
	Through practice of sports, being able to explain the necessity of physical strenth and health promotion.	Health and Sports Courses	Health and Sports Courses						

Academic achievements Evaluation items		1st grade		2nd grade		3rd grade		4th grade	
		Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester
Comprehensive Abilities	(1) Acquiring a ability to think logically. (2) To acquire ability to utilize mathematical thinking. (3) To acquire the ability to understand sentences and communicate information.	Introductory Seminar for						Special Study of Mathematics and Informatics for Graduation	Special Study of Mathematics and Informatics for Graduation
	(4) To improve one's ability to learn independently.							Special Study of Mathematics and Informatics for Graduation	Special Study of Mathematics and Informatics for Graduation
			Liberal Arts Education Subjects	Basic Specialized Subjects	Specialized Education Subjects	Graduation Thesis			