



School of Fundamental Science and Engineering

Waseda University

Parents' Day
November 2026

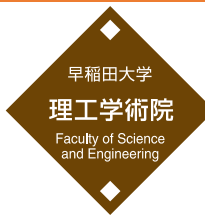
Table of contents



1. Curriculum and features of the School of Fundamental Science and Engineering
2. Graduate school and career paths
3. A place for proactive learning
4. The English-based program
5. Study abroad, globalization and diversity
6. Scholarships
7. Departments in the School of Fundamental Science and Engineering

Footnote

- 1-3: Mainly for Japanese-based undergraduate program
4: Mainly for English-based undergraduate program
5-7: For both Japanese- and English-based programs



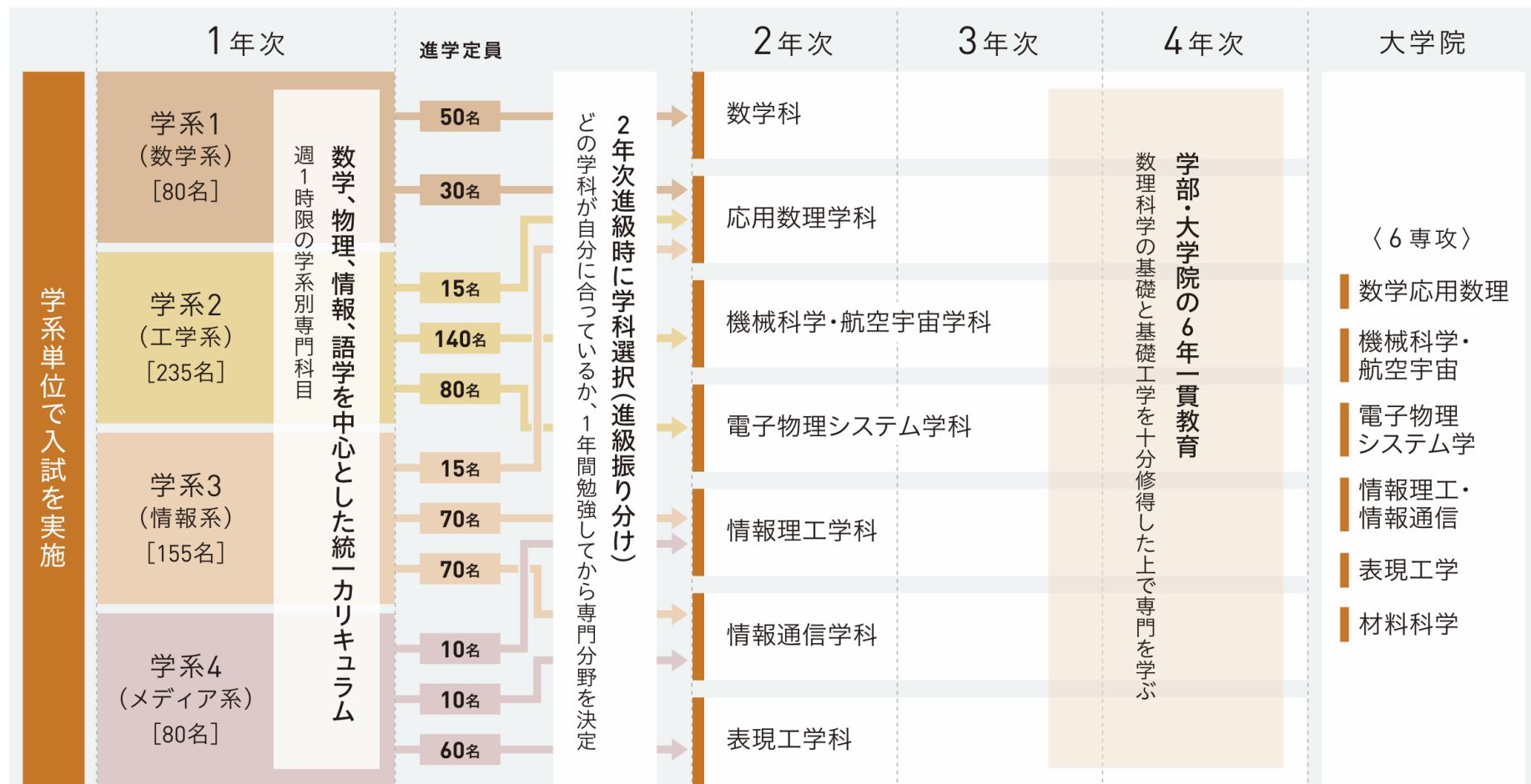
Curriculum and Features of the School of Fundamental Science and Engineering

Curriculum of the school of FSE



- ◆ The School of Fundamental Science and Engineering (FSE) aims to let students learn **a broad range of science and engineering skills** and **a high level of knowledge** necessary for key industries and advanced research, while emphasizing the fundamentals of science and engineering.
- ◆ In the first year, students belong to one of **four academic systems (1, 2, 3, and 4)**. When they advance to the second year, they are divided into **seven departments** (Mathematics, Applied Mathematics, Applied Mechanics and Aerospace Engineering, Electronic and Physical Systems, Computer Science and Engineering, Communications and Computer Engineering, and Intermedia Art and Science) based on their preferences.
- ◆ This allows first-year students to concentrate on learning the fundamentals of science and engineering and to **gain exposure to a wide range of specialized areas**.

Curriculum of the school of FSE



Curriculum of the school of FSE



The three-division system was reorganized into four, with Division II split into Engineering (Division 2) and Information (Division 3). The total number of students and the quotas of each division remain unchanged.

Before AY2024

	学系 I (数学系) 80 名	学系 II (工学系) 350 名	学系 III (メディア系) 120 名
各学系から進級できる学科と人数の内訳	数学科 (50 名) 応用数理学科 (30 名)	応用数理学科 (30 名) 機械科学・航空宇宙学科 (140 名) 電子物理システム学科 (80 名) 情報理工学科 (50 名) 情報通信学科 (50 名)	情報理工学科 (30 名) 情報通信学科 (30 名) 表現工学科 (60 名)
一般選抜での募集人数	45 名	210 名	65 名

From AY2025

	学系 1 (数学系) 80 名	学系 2 (工学系) 235 名	学系 3 (情報系) 155 名	学系 4 (メディア系) 80 名
各学系から進級できる学科と人数の内訳	数学科 (50 名) 応用数理学科 (30 名)	応用数理学科 (15 名) 機械科学・航空宇宙学科 (140 名) 電子物理システム学科 (80 名)	応用数理学科 (15 名) 情報理工学科 (70 名) 情報通信学科 (70 名)	情報理工学科 (10 名) 情報通信学科 (10 名) 表現工学科 (60 名)
一般選抜での募集人数	45 名	140 名	90 名	45 名

Features of the school of FSE



- Enrollment by academic systems
- First-year basic undergraduate education
- Selecting a department at the time of promotion to the second year (per system)

◆ Emphasis on basic education

All departments of the School of FSE are responsible for the first-year basic education.

◆ Elimination of mismatch in selecting a department

Accurate and sufficient information

+ individual's interest and aptitude

◆ Formation of an interdisciplinary network of friends

First year students advance to seven different departments

Minors in our education system



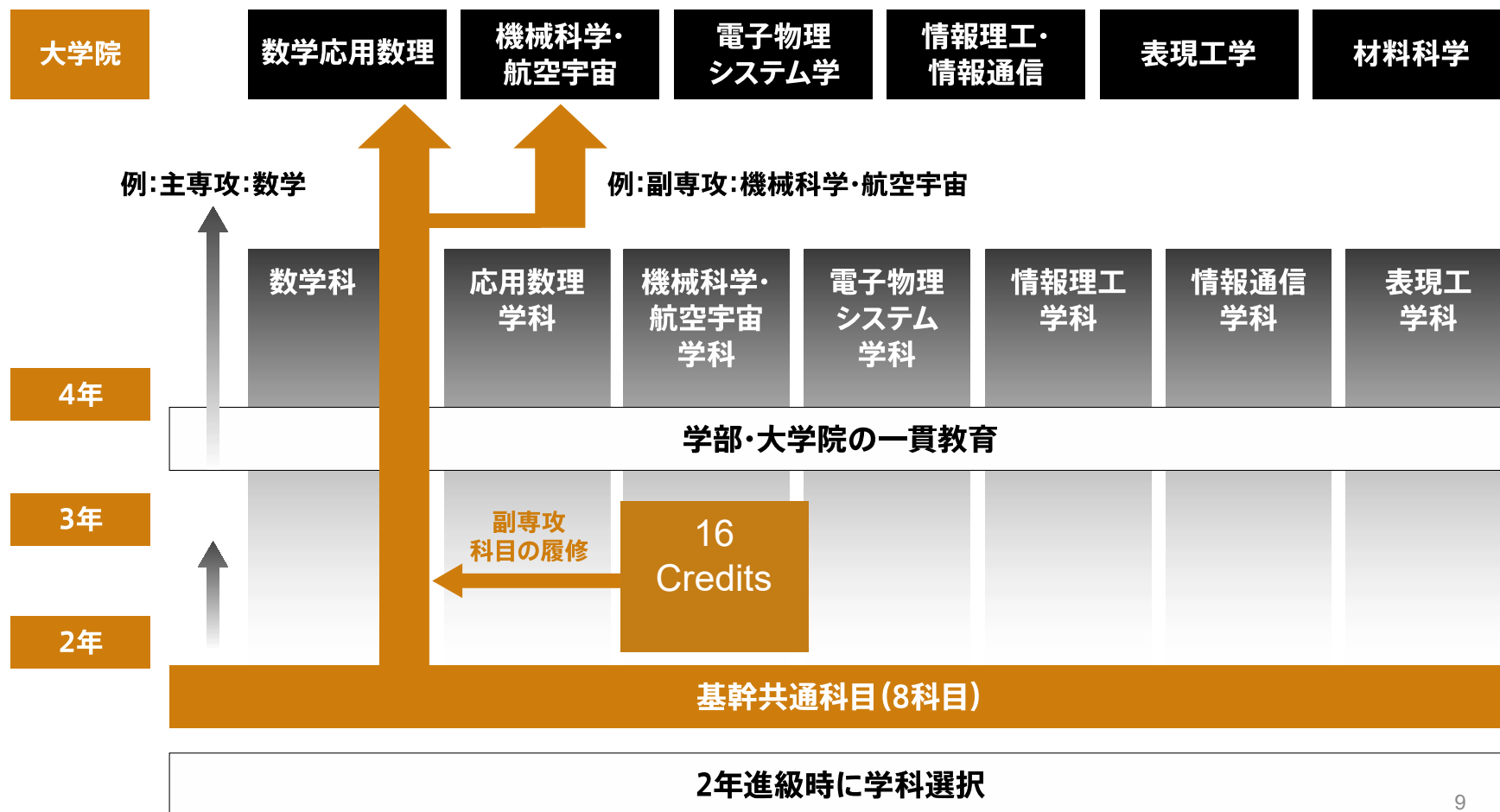
- ◆ The School of Fundamental Science and Engineering (FSE) has introduced **a system of minors** so that the students can actively study subjects other than those in their own departments in the second year and beyond. Students can acquire a wide range of specialized knowledge by taking a minor, which can also be applicable to the studies in their majors.
- ◆ Students who take the minor may enter the graduate school of their departments as well as the **graduate school designated by the minor** through the entrance exam **with recommendation**. Note that the consent between both your department and the graduate school you are entering is required.

For more information, please refer to the following URL

<https://www.fse.sci.waseda.ac.jp/s-major/>

Minors in our education system

- A variation of “learning” that expands your possibilities
- Fostering an interdisciplinary perspective



Common courses in the school of FSE



- ◆ **Common courses** were introduced in the School of FSE in 2012 to further enrich basic education such as mathematics.
- ◆ Students can build **a solid foundation for science and engineering studies** by taking common courses. This is the foundation for students to understand specialized subjects from a more fundamental point of view and to become active engineers and researchers in the future.
- ◆ Common courses are **elective courses** for students in the school of FSE (2nd year or above). The eight common courses and the selectable courses for students in each department are shown in the table on the next page.

Common courses in the school of FSE

Course Names	Math	Appl. Math	Mech. Aero.	Elect. Phys.	Comp. Sci.	Comm. Comp.	Int. Art Sci.
Fourier Analysis			○	○	○	○	○
Differential Equations				○	○	○	○
Vector Analysis				○	○	○	○
Complex Analysis					○	○	○
Applied Linear Algebra	○	○	○	○	○	○	○
Electromagnetism			○		○	○	○
Quantum Mechanics	○	○	○		○	○	○

Course status will be announced at the beginning of every academic year.

Example of timetable in FSE

1st-year student, System 2

1 年生 (学系2)		月	火	水	木	金	土
	1				数学A2 (線形代数)		理工文化論
	2		Communication Strategies 1	工学系の モデリングA★★	Academic Lecture Comprehension 1	理工学 基礎実験1A	
	3	数学B2 (微分積分)	数学B2 (微分積分)		科学・技術の 社会史		
	4		Cプログラミング 入門				
	5	基礎の数学	基礎物理学A	メディア処理 技術概論			
	6						

1st Period: 8:50 - 10:30, 2nd Period: 10:40 - 12:20, 3rd Period: 13:10 - 14:50,
4th Period: 15:05 - 16:45, 5th Period: 17:00 - 18:40, 6th Period: 18:55 - 20:35

Note: Starting from the 2023 academic year, Waseda University has set the duration of each class period to 100 minutes.

Example of timetable in FSE

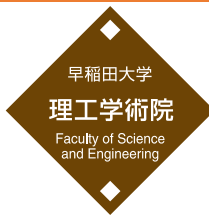
3rd-year student, Department of Electronic and Physical Systems

3 年生 (電子物理システム学科)		月	火	水	木	金	土
	1						
	2		電子回路A★		システム制御と 機械学習	既約表現論★	
	3	電子物理 システム実験B★	統計力学		LSI アーキテクチャ	電子物理 システム特別概論★	
	4		光エレクトロ ニクス★			電子物理 システム演習C★	
	5					生命科学概論A	
	6						

1st Period: 8:50 - 10:30, 2nd Period: 10:40 - 12:20, 3rd Period: 13:10 - 14:50,

4th Period: 15:05 - 16:45, 5th Period: 17:00 - 18:40, 6th Period: 18:55 - 20:35

Note: Starting from the 2023 academic year, Waseda University has set the duration of each class period to 100 minutes.



Graduate School and Career paths

Admission to master's program on recommendation and pre-emptive graduate courses



- ◆ Deepen your studies and improve your abilities as a researcher or engineer.
- ◆ Every year, approx. 60%-70% of undergraduate graduates proceed to the master's program.
- ◆ Curriculum based on the six-year integrated education system from undergraduate to graduate levels.
- ◆ Good career paths.

Recommendation criteria for master's programs

Selection will be made by each student's academic performance based on a criteria of each department.

Pre-emptive graduate courses

	専攻名	先取り履修の 認定上限単位数
基幹理工学研究科	数学応用数理	10 単位
	機械科学・航空宇宙	4 単位
	電子物理システム学	10 単位
	情報理工・情報通信	10 単位
	表現工学	10 単位
	材料科学	4 単位

Doctoral Programs

- ◆ Be a world-class researcher or engineer.
- ◆ The number of students from Asia and Europe has been increasing in recent years.
- ◆ We have a recommendation admission system and various entrance examination systems.

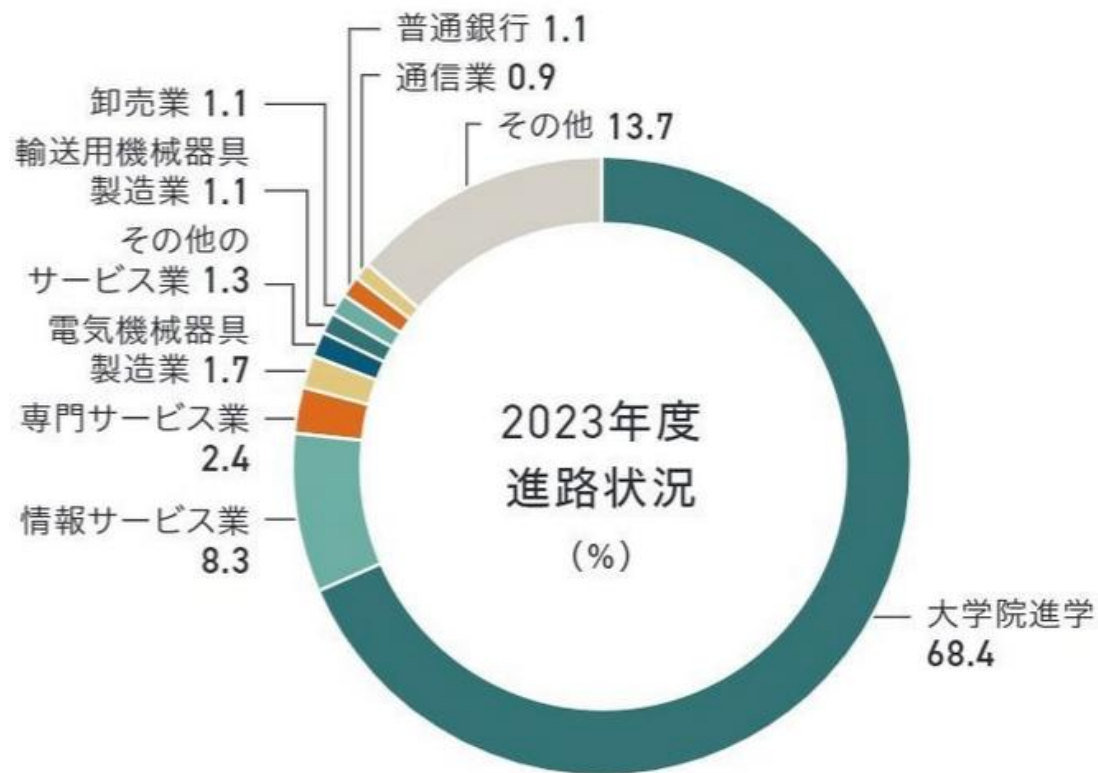
Examples of financial support for doctoral students

- Japan Society for the Promotion of Science (JSPS), Young Researcher (DC1, DC2)
- Waseda's research associate system
- University scholarship for young researchers in doctoral programs (award)
- Japan Student Services Organization (JASSO) Scholarship
- Waseda University Open Innovation Ecosystem Program for Pioneering Research (W-SPRING)

Ph.D. degree conferral in September



Employment of graduates

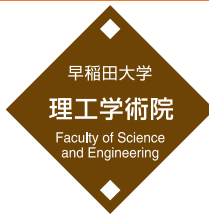


卒業後の進路

〈学部卒業者および修士課程修了者の主な就職先一覧〉

アクセンチュア、野村総合研究所、富士通、日立製作所、三菱重工業、ソニーセミコンダクタソリューションズ、楽天グループ、NEC、NTTデータグループ、KDDI、ソニー、本田技研工業、NTTドコモ、リクルート、PwCコンサルティング、三菱電機、キーエンス、ベイカレント・コンサルティング、みずほフィナンシャルグループ、LINEヤフー、ルネサスエレクトロニクス、三菱UFJ信託銀行、東京ガス、日本IBM、日本航空、電通、コーエーテクモホールディングス、ソニー・インタラクティブエンタテインメント、アマゾンウェブサービスジャパン、シャープ、トヨタ自動車、パナソニック、モルガン・スタンレー・グループ、東京海上日動火災保険、日鉄ソリューションズ、日本IBMシステムズ・エンジニアリング、任天堂

※進路データは2024年3月卒業者・修了者の実績です。



A Place for Proactive Learning

Thorough follow-up: Q&A desk



For Undergraduate Students Struggling with Mathematics

Have you ever felt like:

- You can no longer understand the content of the lectures,
- The mathematical terms used in the lectures make no sense to you,
- There's so much to memorize that you don't know where to start?

Many students, regardless of their major, face difficulties with university-level mathematics.

At the Mathematics Q&A, we primarily support undergraduate students of the Faculty of Science and Engineering.

Assistant professors, research assistants, and graduate students from the Department of Mathematics and the Department of Applied Mathematics provide assistance to help you understand the material.

The subjects we mainly cover include:

Basic Mathematics, Mathematics A1, 2 (Linear Algebra), Mathematics B1, 2 (Calculus), and other B1 group subjects.

We may also be able to assist with other mathematics-related queries.

Before giving up on the lectures, please feel free to come and seek advice.

Thorough follow-up: Q&A desk

Math Q&A

In AY 2025, students can choose from the following options as a way of asking.

- Emails
- Zoom
- face-to-face

Also, physics Q&A, and computer science Q&A are ready!



A scene from Math Q&A

For more information, please refer to the following URL

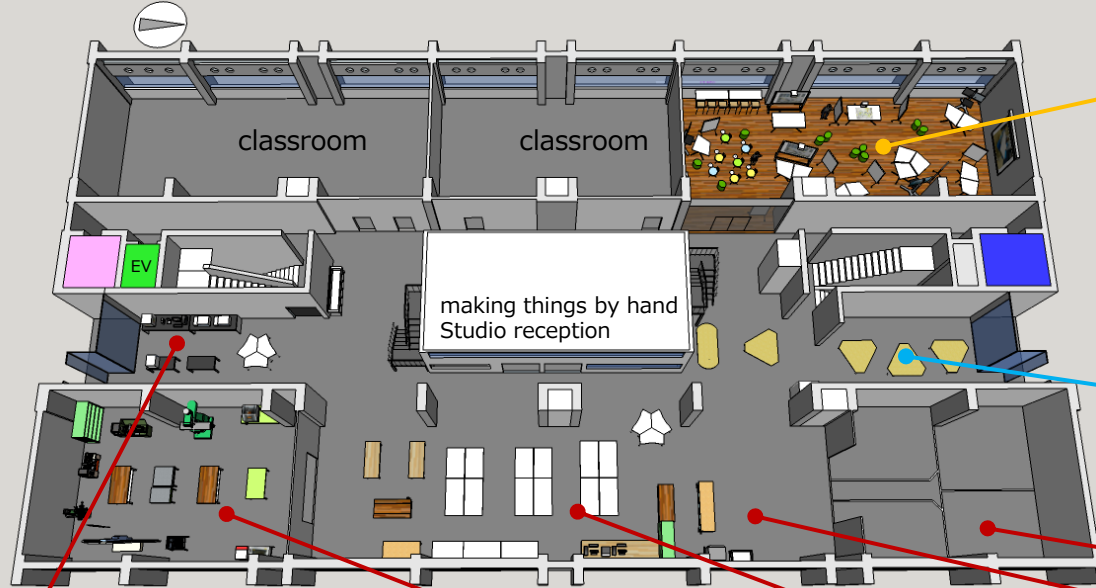
<https://sites.google.com/view/waseda-math-qanda/>

NISHIWASEDA Kyosoukan

A place for students to learn on their own

Learning Commons” and “WASEDA Monozukuri Kobo

Building 61, 1st floor



Learning Commons

It promotes interaction between students and Exposure to diverse perspectives, generating new ideas.



Job Search Room (and Lounge)

Although it was originally intended as a place to browse employment-related materials, it can be used as a lounge. Vending machines are also available.



Creative Design Area

There is a full range of hot digital fabrication environments such as 3D printers, 3D scanners and embroidery sewing machines.



3D printer



embroidery machine

3D Scanner

Machine Tool Room

Full-scale resin, wood and metal processing is available. Classes are held periodically.



RP Machine



Laser Cutter



panel saw



lathe

workspace

A place for small crafts and work. We also have a wide range of analog tools such as soldering irons, saws and scissors.



soldering iron



Plane



Basic tools



Ultrasonic Cutter

Ceramic art

You can mold clay and make pottery. Please contact the staff if you are interested.



electric wheel



electric kiln

Group Activities

In order to achieve great things, it is important to try out different perspectives with your colleagues.

Rental space available.
⚠ more information, please contact our staff.



WASEDA Monozukuri Kobo, a Manufacturing Studio

By giving some shape to new ideas and repeating the process of trial and error, we are able to reach for deeper, richer ideas and creativity

COMPUTER ROOM

- ◆ Computer rooms are in
Nishi-Waseda Campus and also in other campuses

<http://www.waseda.jp/navi/room/>

63号館3階 情報フロアマップ / Third Floor Map at Building 63



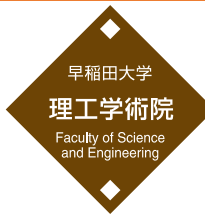
For the latest information on classrooms where PC rooms can be used in conjunction with BYOD, please refer to:
https://info.mse.waseda.ac.jp/pcroom/pcroom_map/

Waseda University Seminar House



- ◆ Five seminar houses
Karuizawa, Sugadaira
Izukawana, Kamogawa, Honjo
- ◆ Department orientations
are held in seminar
houses.
- ◆ Seminar camps by
laboratories, etc.





The English-Based Program

English-based program

The new English-based program started in the AY 2018.

- ◆ There are **two majors** and **five minors** in the School of Fundamental Science and Engineering.
- ◆ The entire curriculum is in English, and those who completed the course can receive a degree.



Major in Mathematical Sciences

Express, connect, and create – Mathematical sciences is the door to the future



Major in Computer Science and Communications Engineering

Incubating CSCE talents to contribute to society

English-based program



◆ Major in Mathematical Sciences

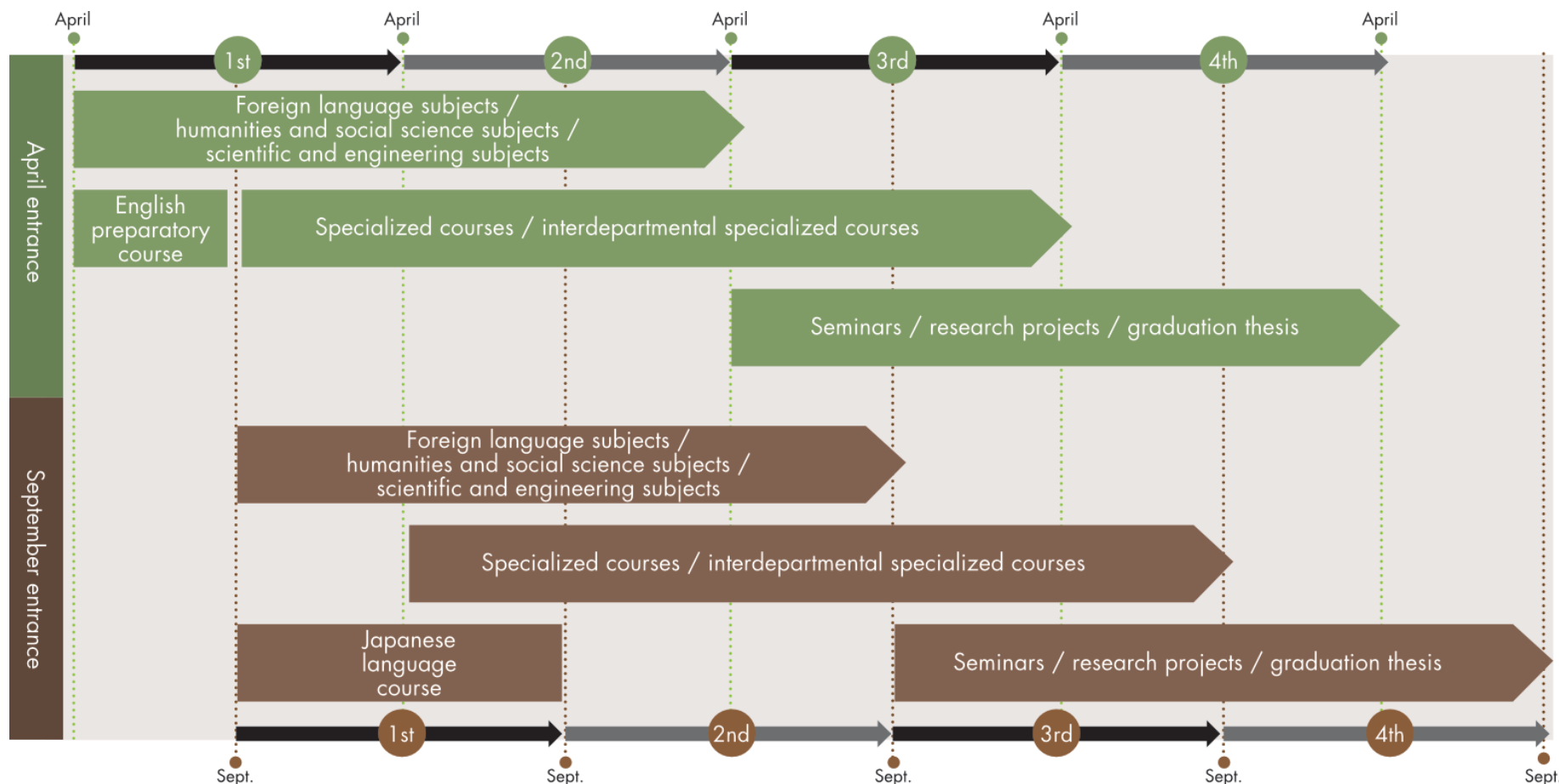
We provide a broad curriculum, ranging from fundamental to applied mathematics. The aim is to equip students with knowledge not only of mathematics but also its connections to scientific and engineering fields, and to provide students with the mathematical skills needed to make a contribution to society. The course places particular focus on three topics that are essential in modern society: nonlinear mathematics, computational mathematics and statistical mathematics.

◆ Major in Computer Science and Communications Engineering

This major has been designed to equip students with advanced knowledge in an integrated field consisting of Computer Science and Computer and Communications Engineering. Computer Science concerns the theoretical fundamentals of computing, information, and communication, while Computer and Communications Engineering concerns the engineering applications of data and content processing and analysis on computers, communication devices, and computer network systems.

English-based program

- ◆ Students entered in September (mainly from overseas) and those entered in April (mainly from Japan) will study together.



Starting from the 2023 AY, April admissions for the CSCE major have been discontinued.

English-based program

- ◆ Not only the departments of Mathematics, Applied Mathematics, Computer Science and Engineering, and Communications and Computer Engineering, which have majors, but also the departments of Applied Mechanics and Aerospace Engineering, Electronic and Physical Systems, and Intermedia Art and Science provide **minor courses**.
- ◆ Access to **all laboratories** in the School of FSE.
 - Minor in Mathematical Sciences
 - Minor in Applied Mechanics and Aerospace Engineering
 - Minor in Physical Electronics
 - Minor in Computer Science and Communications Engineering
 - Minor in Intermedia Arts and Sciences

Starting from the 2023 AY, the minors in Applied Mechanics and Aerospace Engineering, Physical Electronics, and Intermedia Arts and Sciences have been discontinued for incoming students.

English-based program

- ◆ The degrees available in the two majors are as follows.

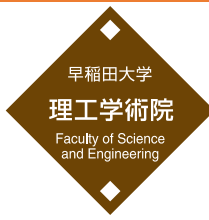
Major	Degree
Mathematical Sciences	● Bachelor of Science ● Bachelor of Engineering
Computer Science and Communications Engineering	● Bachelor of Engineering

- ◆ The Graduate School offers the following English-based programs

- Pure and Applied Mathematics
- Applied Mechanics and Aerospace Engineering
- Electronic and Physical Systems
- Computer Science and Communications Engineering
- Intermedia Studies
- Materials Science

For details of the graduate school, please refer to the following URL

https://www.waseda.jp/fsci/en/admissions_gs/



Study Abroad, Globalization and Diversity

Study abroad programs



EX-R: Exchange Program

Study abroad program based on an exchange agreement.

Your credits may be approved for specialized subjects, and it makes easy to make a plan for graduation.

In principle, tuition is paid to Waseda university and tuition at the host university is waived.

CS-L: Language Oriented Program

The program is designed to participate in the curriculum set by the host university for Waseda University students.

Studying a theme-based curriculum with a focus on foreign languages.

In principle, tuition for Waseda university is exempted, and program fees must be paid to the host institution.

Program for FSE students

- Exchange program for FSE students only (EX-R)
- Your credits may be approved for specialized subjects and it will help you make your study plan easier until graduation.



Spring Recruitment (example for 2025)

Location	Name of the University	program	Note
Australia (Sydney)	University of New South Wales 	Math Focused For FSE Students, EX-R, English	• Only students of School of Fundamental Science and Engineering (Department of Mathematics and Department of Applied Mathematics, 2nd-year or above at the time of application) are eligible to apply. • Applicants must consult with the faculty member in charge of the program in advance and receive an explanation of the program's curriculum and credit approval after returning to their home country.
	The University of Sydney 	Math Focused For FSE Students, EX-R, English	

Program for FSE students



- Exchange program for FSE students only (EX-R)
- Your credits may be approved for specialized subjects and it will help you make your study plan easier until graduation.

Fall recruitment (example for 2025)

Location	Name of the University	program	Note
United Kingdom (York)	University of York 	Math Focused For FSE Students, EX-R, English	Only students of School of Fundamental Science and Engineering (Department of Mathematics and Department of Applied Mathematics, 2nd-year or above at the time of application) are eligible to apply.
The Netherlands (Enschede)	University of Twente 	Math Focused For FSE Students, EX-R, English	Applicants must consult with the faculty member in charge of the program in advance and receive an explanation of the program's curriculum and credit approval after returning to their home country.
Finland (Helsinki)	Aalto University 	Math Focused For FSE Students, EX-R, English	

Various backgrounds of admission

- ◆ General entrance examination
- ◆ Recommendation from designated schools
- ◆ Affiliated schools:
Gakuin, Honjo, Sojitsu,
Waseda senior high, Waseda-Shibuya, Setsuryo, Saga
- ◆ Entrance examination for international students
- ◆ Kitakyushu regional collaboration entrance exam on recommendation
- ◆ English-based programs (AO, designated schools, and special entrance exams)



Kitakyushu Regional Collaboration Program

<https://www.waseda.jp/top/news/47859>

Waseda University Graduate School of Information, Production and Systems (IPS) is an independent graduate school established in 2003 in Kitakyushu Science and Research Park as a base for Waseda University's Asian expansion.

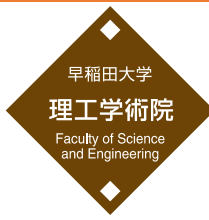


In IPS, we are working with three fields, which are **information architecture**, **production systems**, and **integrated systems**.

Kitakyushu Regional Collaboration Program

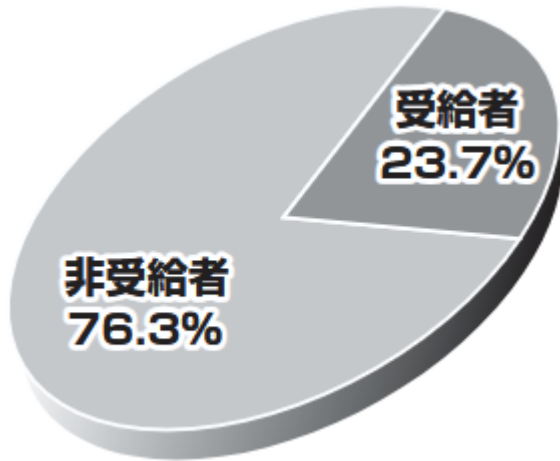


The School of Fundamental Science and Engineering and IPS jointly started the Kitakyushu Regional Collaborative Program (IPS course) from the academic year 2018.

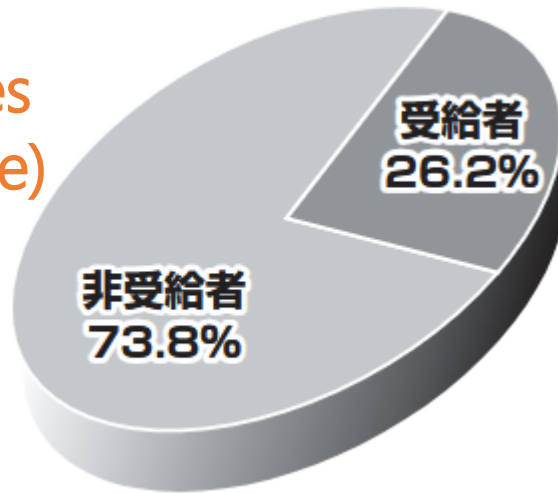


Scholarships

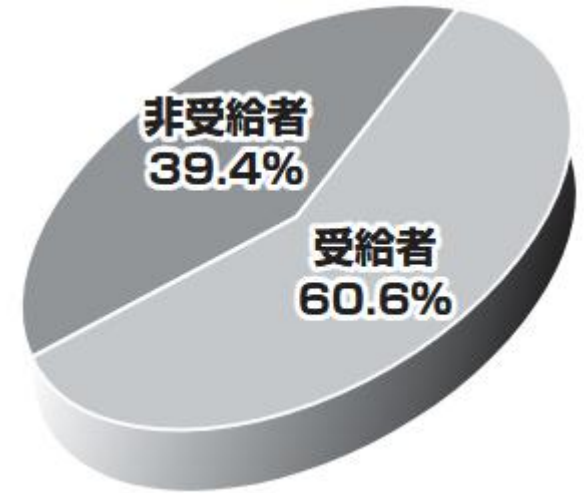
Rate of scholarship recipients (AY 2023)



Undergraduates
(University-wide)



Master's Program
(University-wide)



Doctoral Program
(University-wide)

For more information,
see the following website of
Scholarships and Financial Assistance Section,
Waseda University
<https://www.waseda.jp/inst/scholarship/>

Scholarship Recipients (AY 2023)

Scholarships and Financial Assistance Section website

Waseda University

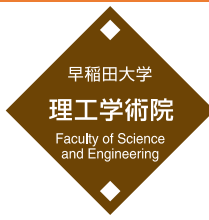
School of FSE (Undergraduates)

<https://www.waseda.jp/inst/scholarship/>

学部	学年	日本学生支援機構			学内奨学金													民間団体 奨学金	地方公共 団体 奨学金	合計	在学者数
		第一種 奨学金	第二種 奨学金	給付 奨学金	大隈	小野	めざせ! 都の西北	校友会 給付	早稲田 大学 緊急	災害学費 減免	安部磯雄 校友会	トップ アスリート・ スポーツ 奨励	小野 外国人	私費 外国人	DDプロ グラム 留学生 特別	渡日前 入試予約 採用給付	指定寄付				
基幹理工学部	1年	21	40	120	2	7	11	1	1							1	3	13	1	221	
	2年	30	38	110	2	4	17	1						2		2	1	22	2	231	
	3年	36	43	72	1	3	7	1					1	1			2	31	2	200	
	4年等	39	36	63	3	3	6		1					3				29		183	
	計	126	157	365	8	17	41	3	2	0	0	0	1	6	0	3	6	95	5	835	2,472

School of FSE (Graduates)

研究科	学年	日本学生支援機構		学内奨学金									民間団体 奨学金	地方公共 団体 奨学金	合計	在学者数
		第一種 奨学金	第二種 奨学金	大隈	小野	校友会 給付	早稲田 大学 緊急	災害学費 減免	小野 外国人	私費 外国人	渡日前 入試予約 採用給付	指定 寄付等				
基幹理工学研究科	1年	75	9	0	13	4			2	5	3	8	25		144	
	2年等	85	15	2	7				2	6	3	6	17		143	
	計	160	24	2	20	4	0	0	4	11	6	14	42	0	287	858

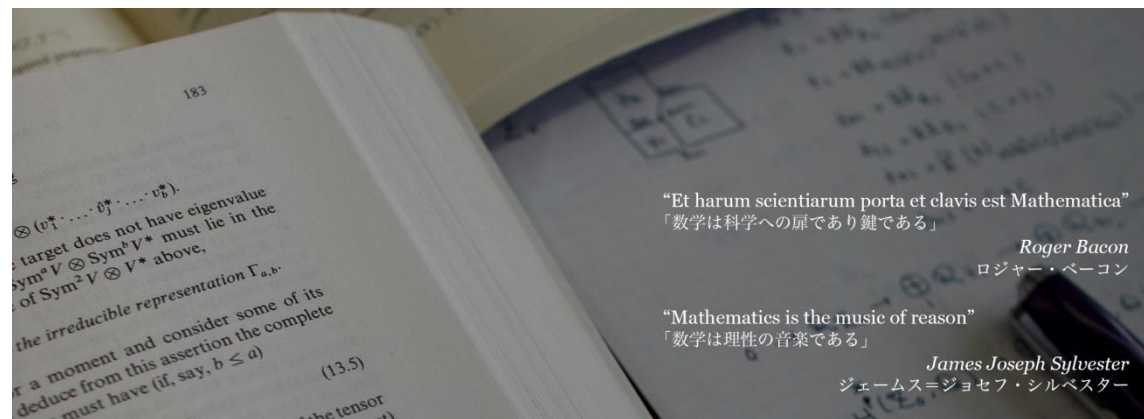
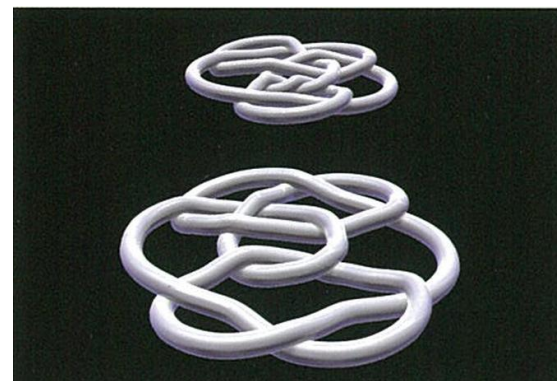
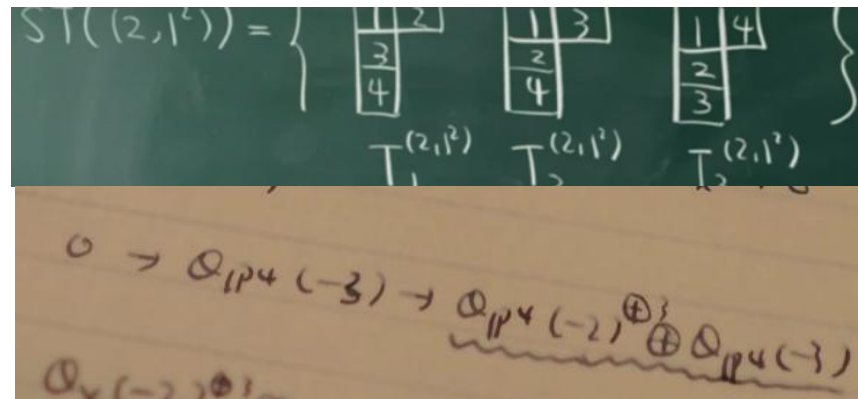


Departments in the School of Fundamental Science and Engineering

Department of Mathematics (System I)

System 1 from AY 2025.

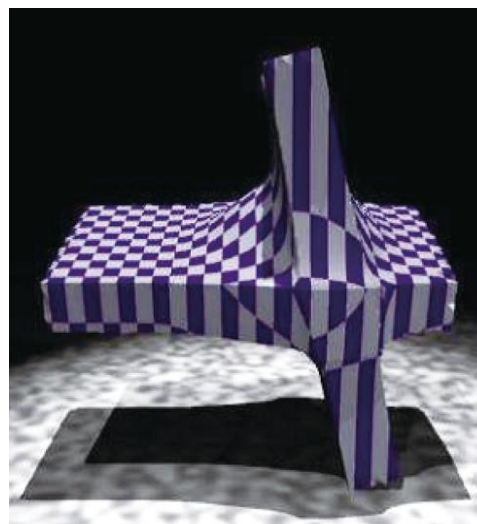
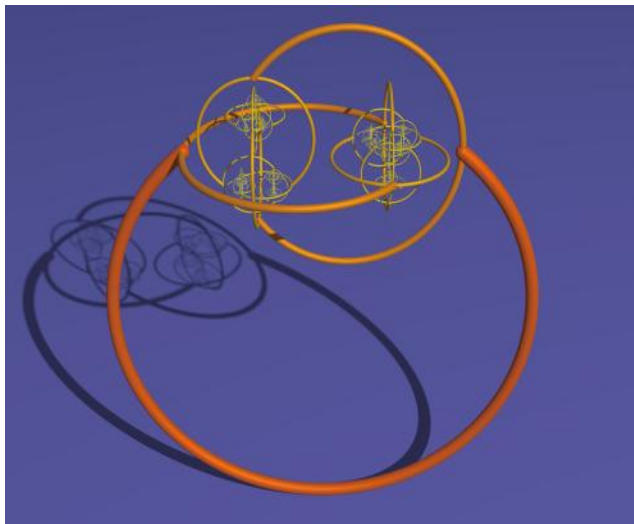
- Research on unsolved problems in pure mathematics and their applications
- Extensive faculty in the four departments of Algebra, Geometry, Analysis and Applied Mathematics
- Graduate School of Mathematics and Applied Mathematics



$$\begin{aligned}\zeta(2) &= 1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \cdots \\ &= \iint_{1 > x_1 > x_2 > 0} \frac{dx_1 \wedge dx_2}{x_1(1-x_2)} = \frac{\pi^2}{6}\end{aligned}$$

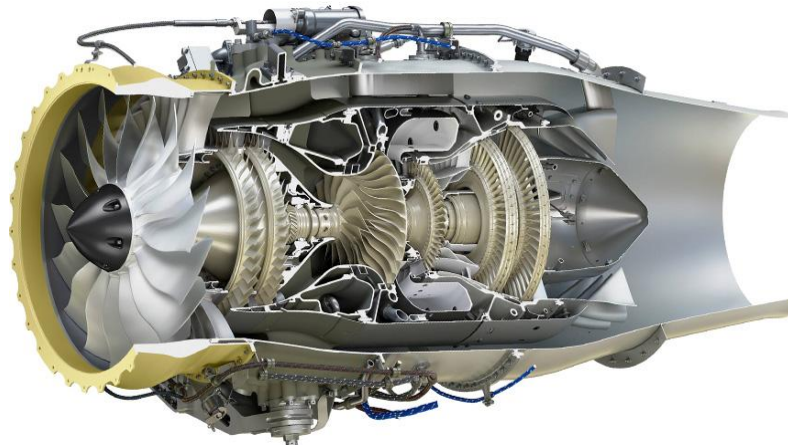
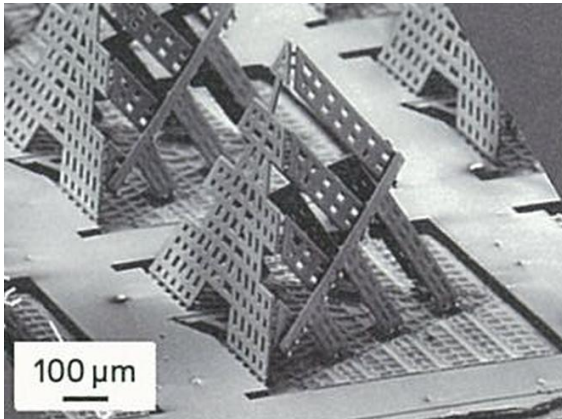
Department of Applied Mathematics (System 1, 2, 3)

- The three research fields of phenomena, statistics, and information, with mathematics at the core
- A wide variety of curricula including mathematics, natural science, engineering, and statistics
- Graduate School of Mathematics and Applied Mathematics



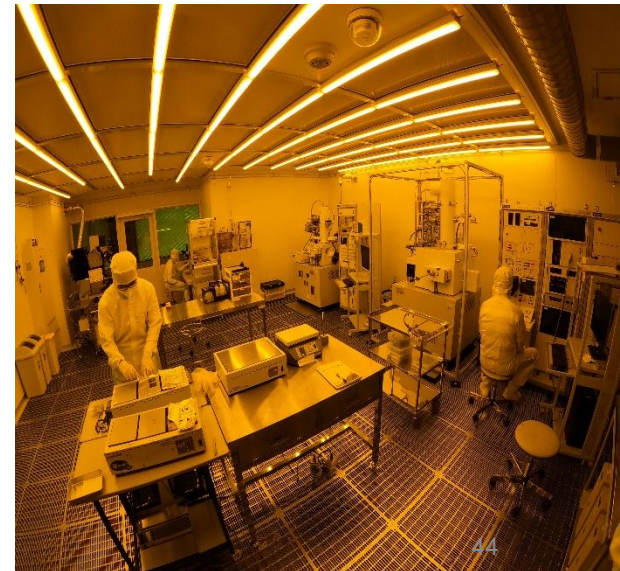
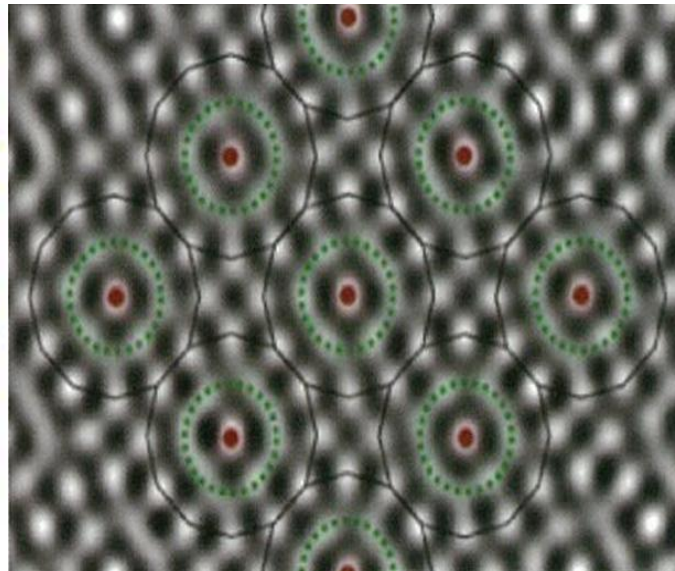
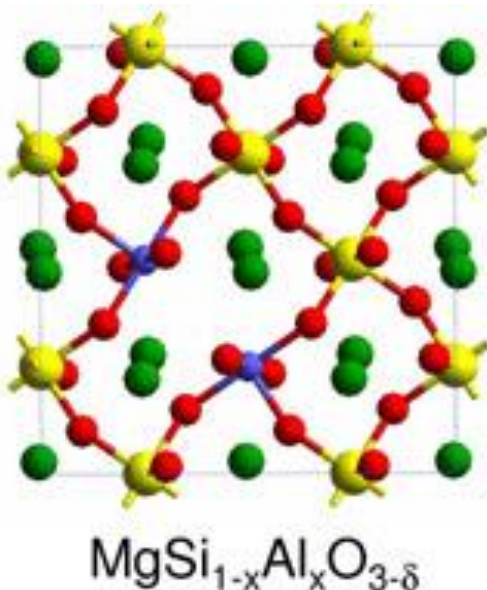
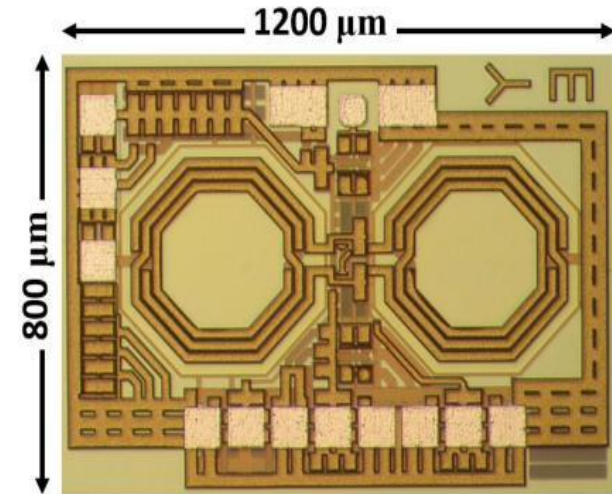
Department of Applied Mechanics and Aerospace Engineering (System 2)

- Emphasis on basic science, covering everything from materials, systems, environment, and energy to aeronautics and space
- Experiments, drawings, and exercises centered on mechanics of materials, fluid mechanics, thermodynamics, dynamics, and applied mathematics
- Graduate School of Applied Mechanics and Aerospace Engineering



Department of Electronic and Physical Systems (System 2)

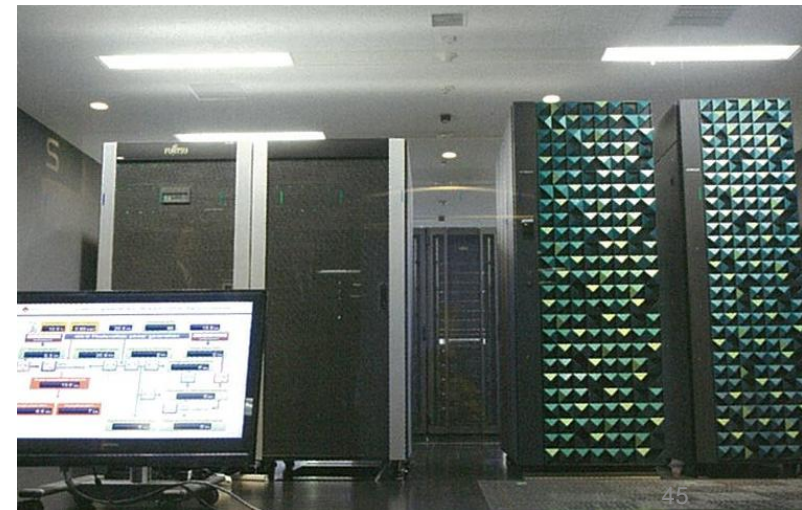
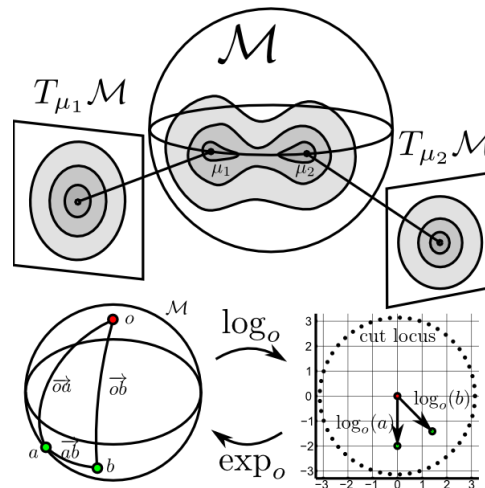
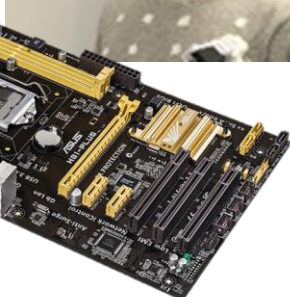
- Research targets at every level from nanodevices to macroscopic system design
- Professors covering a wide range of subjects such as atoms and molecules, materials, devices, circuits, chips, and communications
- Graduate School of Electronic and Physical Systems



Department of Computer Science and Engineering (System 3, 4)

System 3, 4 from
AY 2025.

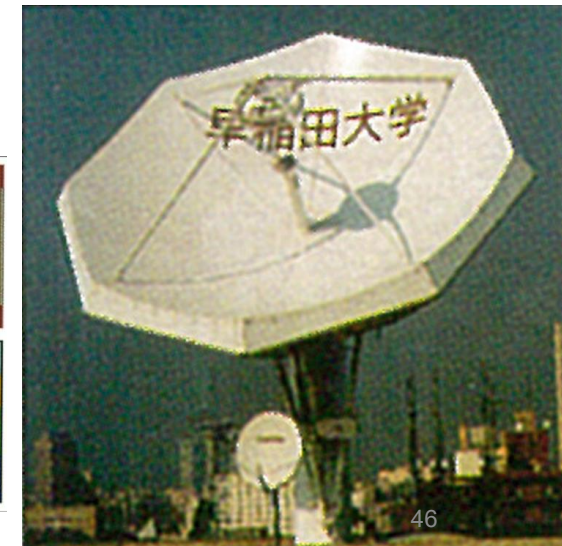
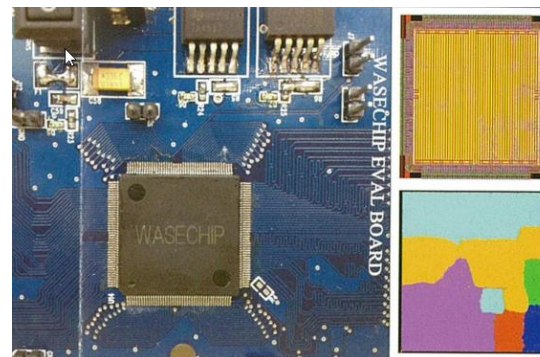
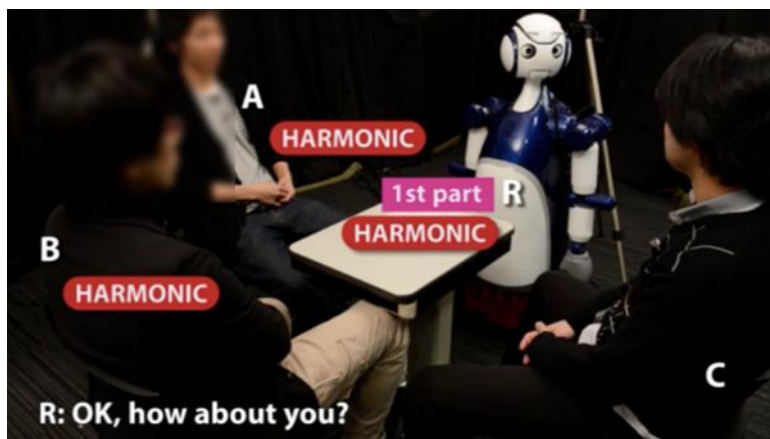
- Research fields encompassing the various fields of information science and information engineering
- An educational system that allows students to acquire a good balance of leading-edge hardware, software, networks, and the technology to use them
- Graduate School of Computer Science and Communications Engineering



Department of Communications and Computer Engineering (System 3, 4)

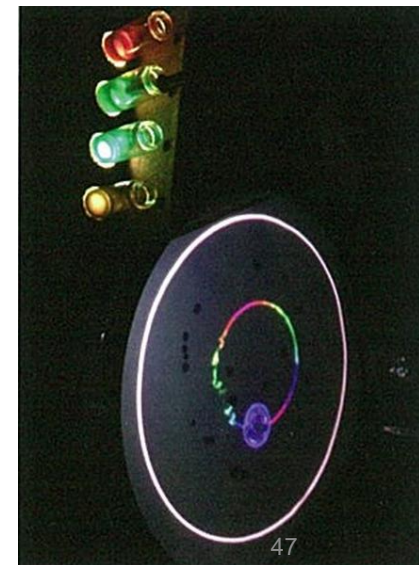
System 3, 4 from
AY 2025.

- Focusing on information and communication networks, research covers everything from hardware to communication
- An education system with three main divisions: information systems, communication networks, and media and content.
- Graduate School of Computer Science and Communications Engineering



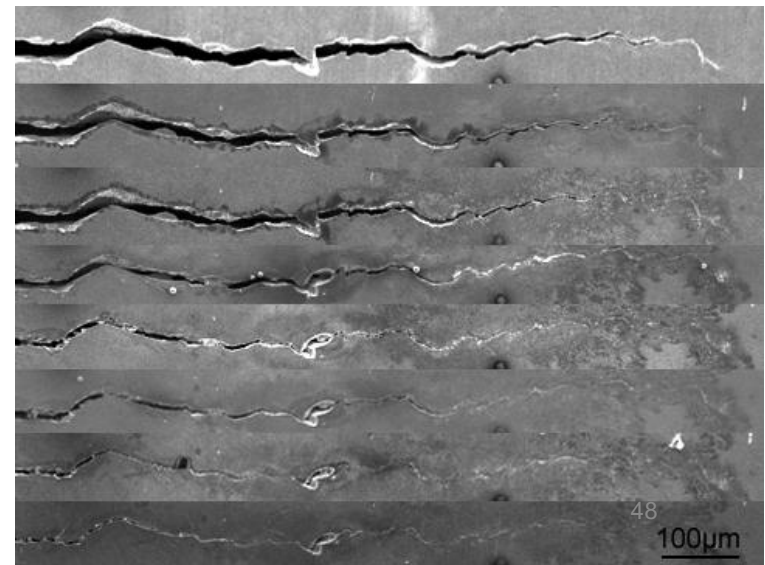
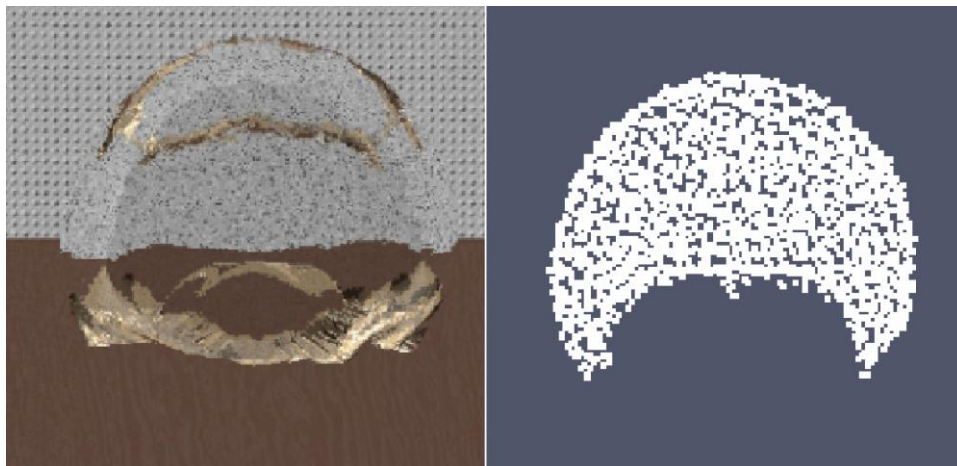
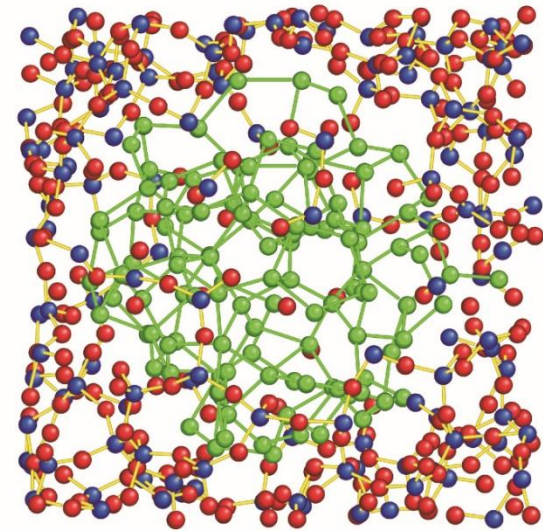
Department of Intermedia Art and Science (System 4)

- Exploring new forms of expression that fuse science and technology with artistic expression, and creating intermedia
- An educational system based on the three pillars of intermedia arts, intermedia engineering and media management
- Graduate School of Intermedia Studies

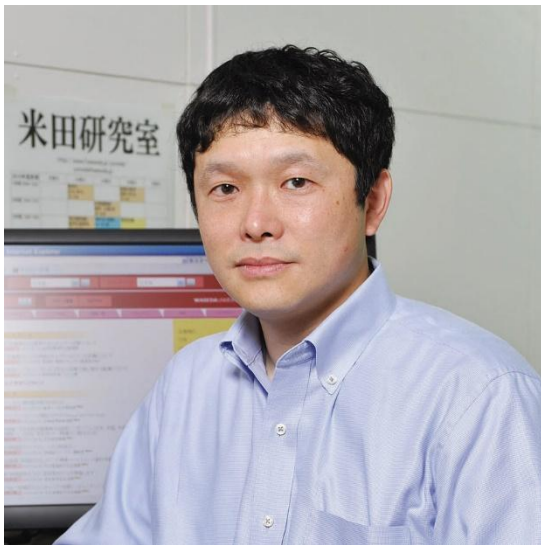


Department of Materials Science (Graduate School)

- Opening up new horizons in materials science
- Integration of material, mathematical and mechanical sciences
- A research and education system consisting of four divisions: New Structural Materials, Basic Metals, Basic Materials, and Mathematical Materials Science.



Message from the Dean of FSE



Prof. Gen Yoneda
Ph.D. (Science)

While the entrance examination system that Japanese universities use is an effective gauge of academic ability, once you get out in the world, the diversity of life experiences that you have will become of dominant importance.

I hope that all of our students will take advantage of the great environment at Waseda to prepare for launching themselves into a world where study alone will not suffice.

School of FSE Website

<http://www.fse.sci.waseda.ac.jp/en/>

FSE
基幹理工学部
School of
Fundamental Science
and Engineering



◆ Please visit the website of School of Fundamental Science and Engineering for the latest information. If you have any questions, please contact us at fse-web@list.waseda.jp.