WINGS advanced skill training programs 2024

・The advanced skills training program offered by WINGS requires annual participation.

・The content that is mandatory to participate must be completed by the end of SPRING GX.

・Follow the instructions of the respective WINGS when participating in the content.

01　WINGS name: Next Generation Development Program for International Excellence

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Task-oriented seminar in research activity	Occasional(All year・Intensive lecture)	online・face-to-face	D1〜D3	○	Set a research activity in consultation with the supervisor

*1 ○: Required to take

02　WINGS name: WINGS for Creating Educational Research（WINGS-CER）

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Stanford/Utokyo Partnership Program on International/Cross-Cultural Education and Global Citizenship	〜6 lectures in total (Partial enrollment possible)	online	D1〜D3	○	
International Scholarly Dialogue for Developng Global Leaders	2-3 days	online or face-to-face	D1〜D3		Depending on the situation, there is a possibility of face-to-face implementation in a foreign country.

*1 ○: Required to take

03　WINGS name: WINGS: Advanced Business Law Program

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Advanced Bussiness Law Program Lecture	105 min./ lecture 　～10 lectures/ year	online or face-to-face	D1～D3	○	

*1 ○: Required to take

04　WINGS name: WINGS of Advanced Economics

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Workshops for WINGS of Advanced Economics	once a week,　All year	online or face-to-face	D1〜D3	○	
Individual meetings with top researchers in Economics	〜twice a year	online or face-to-face	D1〜D3		

*1 ○: Required to take

05 WINGS name: Global Studies Initiative: WINGS (GSI-WINGS)

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
GSI Seminar	90 min., occasionally held	online or face-to-face	D1～D3		
GSI WINGS Meeting	50 min., twice a month	online	D1～D3	○	

*1 ○: Required to take

06 WINGS name: WINGS of Advanced Basic Science Course (WINGS-ABC)

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Advanced Basic Sciences Seminar	～half a day	face-to-face	D1～D3	○	The content is to introduce your research to the undergraduates during the lunch break, which includes a practice presentation to the course students in advance.

*1 ○: Required to take

08 WINGS name: Global Science Graduate Course (GSGC)

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
GSGC Exchange Semina	3時間	online	D1〜D3	〇	

*1 〇: Required to take

09 WINGS name: International Graduate Program for Excellence in Earth-Space Science（IGPEES）

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Special Lectures on Earth-Space Frontier Science	1 class×13 times	online	D1〜D3	△	
Exercises in Earth-Space Frontier Science	3 days	online	D1〜D3	△	
Onsite Training in Earth-Space Frontier Science	more than 2 weeks	face-to-face or online	D1〜D3	△	

*1 ○: Required to take, △: Required to take one of them

10　WINGS name: Forefront Physics and Mathematics Program to Drive Transformation (FoPM)

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Diversity and Ethic Training	2 hours×3 times	online	D1～D3	○	
4PM Seminar	2 hours/1 lecture	online	D1～D3	△	
International Career Seminar	1 day	online/face-to-face	D1～D3	△	
International Research Experience	2 weeks～3 months	face-to-face	D1～D3		

★The students have to select two from the above contents.

*1 ○: Required to take, △: Required to take one of them

11　WINGS name: WINGS: Co-designing Future Society（WINGS CFS）

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Engineering Competency I-Project Based Learning	Once a week, half a year	face-to-face	D1〜D3		
Engineering Competency II-Research Internship	1〜2 months (internship at a company), All year	face-to-face or online	D1〜D3		
Engineering Competency III-Summer Camp	3〜4 days (Intensive lecture course)	face-to-face	D1〜D3		
Fundamentals of Future Society Initiative I	4 lectures×3 days （Intensive lecture course), half a year	face-to-face	D1〜D3		
Fundamentals of Future Society Initiative IIE	4 lectures×3 days （Intensive lecture course), half a year	face-to-face	D1〜D3		
Engineering Literacy II -Business Strategy, Intellectual Property-	Once a week, half a year	face-to-face	D1〜D3		
Poster Presentation	half a day	face-to-face	D1〜D3	○	

*1 ○: Required to take

12　WINGS name: WINGS Program for Materials Research, Information, and Technology（MERIT-WINGS）

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Conspectus of advanced materials science	S semester, every week	face-to-face or online	D1~D3	○	Must be taken while enrolled in the course.
Material science executive seminar	All year, 4 times a year	On-site, face-to-face or online	D1~D3	○	Opportunities for visiting innovation sites such as domestic and foreign companies, and research institutes, as well as on-site discussion at public offices. Must be taken at least three times while enrolled in the course.

*1 ○: Required to take

13 WINGS name: WINGS Program in Gerontology Global Leadership Initiative for Age-Friendly Society (WINGS-GLAFS)

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
General Theory of Gerontology 1	one period per week, one term	online or face-to-face	D1/MD1	○	
General Theory of Gerontology 2	one period per week, one term	online or face-to-face	D2/MD2	○	
Practical Exercise for Gerontology	Half a day (Once) *MD3 and MD4 are required to participate each year	online or face-to-face	D3/MD3/MD4	○	Participate in "Gerontology Academy" activities.

*1 ○: Required to take

14 WINGS name: Sustainable Agriculture Education Program

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
WINGS Sustainable Agriculture Education Program research exchange meeting	Twice a year, one and a half days each	face-to-face	D1～D4	○	
Mathematical sciences in agriculture	S1/SP terms	face-to-face and online	D1～D4		Reccomended course
One Earthology Ⅰ	TBD	face-to-face	D1～D4		Reccomended course
One Earthology Ⅱ	TBD	face-to-face	D1～D4		Reccomended course
One Earthology Ⅲ	TBD	face-to-face	D1～D4		Reccomended course
Practical Training in the Sustainable Agriculture Education Program Ⅰ	Set by yourself	face-to-face	D1～D4		Reccomended course
Practical Training in the Sustainable Agriculture Education Program Ⅱ	Set by yourself	face-to-face	D1～D4		Reccomended course
Practical Training in the Sustainable Agriculture Education Program Ⅲ	Set by yourself	face-to-face	D1～D4		Reccomended course
Sequence Statistics and Mathematical Biology	S1 term	online	D1～D4		Reccomended course
Introduction to Genome Informatics	S1 term	online	D1～D4		Reccomended course
Introduction to Biostatistics	S1 term	online	D1～D4		Reccomended course
Knowledge Information Processing	SP/A1 terms	online	D1～D4		Reccomended course
Sequence Statistics and Mathematical Biology	every other year	every other year	D1～D4		Reccomended course
Molecular Modeling and Simulation	S1/SP terms	online	D1～D4		Reccomended course
Omics Analysis	A1 term	online	D1～D4		Reccomended course
Functional Genomics	S1/SP term	online	D1～D4		Reccomended course
Introduction to Systems Biology	SP term	online	D1～D4		Reccomended course
Introduction to Structural Bioinformatics	S1 term	online	D1～D4		Reccomended course
Field Informatics	S1/SP term	online	D1～D4		Reccomended course
Special Lectures on Agricultural Bioinformatics Ⅰ	A1 term	online	D1～D4		Reccomended course
Special Lectures on Agricultural Bioinformatics Ⅱ	SP term	online	D1～D4		Reccomended course
Special Lectures on Agricultural BioinformaticsⅢ	S1 term	online	D1～D4		Reccomended course
Special Lectures on Agricultural BioinformaticsⅣ	SP term	face-to-face and online	D1～D4		Reccomended course
Special Lectures on Agricultural Bioinformatics Ⅰ	every other year	every other year	D1～D4		Reccomended course
Research Exercise on Agricultural Bioinformatics	W term	online	D1～D4		Reccomended course
Food Science Seminar Series Ⅰ	S1/SP/A1 terms	face-to-face and online	D1～D4		Reccomended course
Food Science Seminar Series Ⅱ	S1/SP terms	online	D1～D4		Reccomended course
Food Science Seminar SeriesⅢ	SP term	face-to-face（Internship at the Ministry of Health, Labour and Welfare or the Ministry of Agriculture, Forestry and Fisheries）	D1～D4		Reccomended course
Topics in Biomass Utilization Research Ⅰ	S1/SP terms	face-to-face	D1～D4		Reccomended course
Topics in Biomass Utilization Research Ⅱ	S1/SP terms	face-to-face	D1～D4		Reccomended course
Biomass Utilization Research Seminar Ⅰ	SP term	face-to-face	D1～D4		Reccomended course
Biomass Utilization Research Seminar Ⅱ	SP term	Not available	D1～D4		Reccomended course

Seminar for Global Agriculture and Culture	SP term	face-to-face and online	D1～D4		Reccomended course
Practices in Global Agriculture and Culture	Domestic training (May-July) Overseas training: 10 days (September)	face-to-face	D1～D4		Reccomended course
Biodiversity and Agriculture	every other year	every other year	D1～D4		Reccomended course
Training in Nature Restoration Operation Monitoring	SP/A1 terms	face-to-face and online	D1～D4		Reccomended course
Agro-Informatics Seminar	Occasional	face-to-face and online (Attendance at symposiums, tours and seminars)	D1～D4		Reccomended course
Writing a Research Proposal	S1/SP terms	online	D1～D4		Reccomended course
Writing a Research Article	A1/A2 terms	online	D1～D4		Reccomended course
Attempts toward innovation and social implementation	SP term	face-to-face and online	D1～D4		Reccomended course
Science Communication	W term	Not available	D1～D4		Reccomended course
Seminar in Science Communication	SP term	face-to-face and online	D1～D4		Reccomended course
Research Ethics and Clinical Ethics I	S1/S2 terms	online	D1～D4		Reccomended course
Basic Lecture for Data Science for Drug Development	A1/A2 terms	online	D1～D4		Reccomended course
Data Mining for Biology	A2 term	TBD	D1～D4		Reccomended course
Software and Algorithm Design for Biology	S1 term	online	D1～D4		Reccomended course
Fundamental Couse I	S1 term	face-to-face and online	D1～D4		Reccomended course
Debate on Ethics in Science and Technology	S1/S2 term	face-to-face and online	D1～D4		Reccomended course
Statistical Analysis for Biosciences	S1/S2 terms	face-to-face and online	D1～D4		Reccomended course

*1 ◯: Required to take

15　WINGS name: WINGS for Life Science and Technology (WINGS-LST)

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Multidisciplinary Lecture Series in Life Science & Technology	Once a week　half term 105 min. / 1 lecture	online or face-to-face	D1～D4		English, held on S term. 2 credits. Credit can be given.
World-leading Innovative Lectures in Life Science & Technology	4 times a year, take 4 lectures 2 hours /　lecture	online or face-to-face	D1～D4		English, point system. 2 credits. Credit can be given.
WINGS-LST Laboratory Training ① Large Experimental Animal Exercise ② Collaborative projects with industrial companies ③ Global Faculty Development Course ④ Internship at industrial companies ⑤ Short-term stays overseas ⑥ Summer Internship ⑦ Designed by student	① Attended 2 lectures out of 4 lectures a year, about half a day for each lecture ② Several times a year, about half a day ③ Two days, about two hours for each lectures ④ Half a day to several days ⑤ About 2 weeks or more ⑥ About 2 months or more ⑦ Occasionally	① face-to-face ② online or face-to-face ③ online or face-to-face ④ online or face-to-face ⑤ face-to-face ⑥ face-to-face ⑦ online or face-to-face	D1～D4		Report submission required. Point system. 2 credits. Credits can be given for one or two courses, depending on the project. For projects that incur expenses, students can participate if the expenses can be covered by the expenses from SPRING or others.
WINGS-LST Seminars ① WINGS Journal Club ② WINGSセミナー（WINGS Seminars）	① Once a month, about 5 times in total, about 1 hour ② Occasionally held, 30 minutes to half a day	online or face-to-face	D1~D4		1 credit. Credit can be given. A point system for each project (a credit is given with 7 points).
WINGS-LST General Meeting / WINGS-LST Colloquium	Twice a year, half day to one day each	online or face-to-face	D1~D4	○	This is a social event for all. No credits will be given; if there is a participation fee for a face-to-face event, you can participate if it can be covered by SPRING or other expenses.
Coaching in English	～1 hour	online or face-to-face	D1~D4		No credits will be given
WINGS-LST Collaboration Project	half a year	online or face-to-face	D1~D4		No credits will be given. When the WINGS program student is the applicant, the SPRING student can participate as a co-applicant. However, they can only participate as a co-applicant if the cost of the joint research can be covered by SPRING or others.

*1 ○: Required to take

16　WINGS name: WINGS for Frontiers of Mathematical Sciences and Physics（WINGS-FMSP）

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Frontiers of Mathematical Sciences and Society II	Autumn semester	online or face-to-face	D1～D3	○	
Frontiers of Mathematical Sciences and Society IV	Autumn semester (5 days in mid-December)	online or face-to-face	D1～D3		
Frontiers of Mathematical Sciences and Physics I～X	Summer semester・Autumn semester	online or face-to-face	D1～D3		

*1 ○: Required to take

17 WINGS name: WINGS Program in Proactive Environmental Studies (WINGS-PES)

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Overseas Exercise in Proactive Environmental Studies II	Overseas Study for 3-6 months		D1～D3	□	Follow the course guidelines for the subjects in the Environmental Knowledge Professional Practicum Group (Subject Group C) (https://wings-pes.edu.k.u-tokyo.ac.jp/home-english/subject-list) .
Research Internship for Proactive Environmental Studies I/II	Internship for 3-6 months	online or face-to-face	D1～D3	□	Follow the course guidelines for the subjects in the Environmental Knowledge Professional Practicum Group (Subject Group C) (https://wings-pes.edu.k.u-tokyo.ac.jp/home-english/subject-list) .
Transdisciplinary Skills and Theories I/II	Participation in seminars of other lab. 6 months - 1 year	online or face-to-face	D1～D3	□	Follow the course guidelines for the subjects in the Environmental Knowledge Professional Practicum Group (Subject Group C) (https://wings-pes.edu.k.u-tokyo.ac.jp/home-english/subject-list) .
Critical Thinking Basics -Select concepts, tools and techniques I	12 lectures in S semester	online or face-to-face	D1～D3	□	
Critical Thinking Basics -Select concepts, tools and techniques II	12 lectures in A semester	online or face-to-face	D1～D3	□	
Critical Thinking Skills -Select applications & reflection I	12 lectures in S semester	online or face-to-face	D1～D3	□	
Critical Thinking Skills -Select applications & reflection II	12 lectures in A semester	online or face-to-face	D1～D3	□	
Special Lecture on Frontier Science X	12 lectures in S semester	online or face-to-face	D1～D3	□	
Special Lecture on Frontier Science XI	12 lectures in A semester	online or face-to-face	D1～D3	□	
Salon of Excellence	Once in 1-2 months	online or face-to-face	D1～D3	○	No credit given.

*1 ○: Required to take, △: Required to take one of them, □:Others

18 WINGS name: International Graduate Program of Innovations for Intelligent World

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Intoroduction to Management / Lecture for Global Creative Leaders Ⅱ	1 lecture / week (6th period of Fri., A1/A2 terms)	online/face-to-face	D1～D3	△	
Facing Social Issues with ICT / Lecture for Global Creative Leaders Ⅸ	1 lecture / week (6th period of Tue., S1/S2 terms)	online/face-to-face	D1～D3	△	
The Startup-Way of Bringing About Innovation/ Lecture for Global Creative Leaders Ⅹ	1 lecture / week (5th period of Thu., A1/A2 terms)	online/face-to-face	D1～D3	△	
Introduction to Machine Learning / Intelligent World Informatics Lecture V	1 lecture / week (3rd period of Thu., A1/A2 terms)	online/face-to-face	D1～D3	△	This lecture is given in English.
Information System Exercises / Intelligent World Informatics Special Lecture VI	1 lecture / week (6th period of Thu., A1 term)	online/face-to-face	D1～D3	△	
GCL Special Lecture in Information Science and Technology VIII	A1 Int	online/face-to-face	D1～D3	△	
Introducing basic machine learning algorithms and their applications / GCL Special Lecture in Information Science and Technology V	1 lecture / week (3rd period of Thu., S1/S2 terms)	online/face-to-face	D1～D3	△	This lecture is given in English.
Reinforcement Learning / GCL Special Lecture in Information Science and Technology VII	1 lecture / week (6th period of Thu., S1/S2 term)	online/face-to-face	D1～D3	△	This lecture is given in English.
Approximation and Online Algorithms with Applications	1 lecture / week (5th period of Mon., S1/S2 term)	online/face-to-face	D1～D3	△	This lecture is given in English.
Algorithms for Information Security and Privacy	1 lecture / week	online/face-to-face	D1～D3	△	This lecture is given in English. Not available in 2024
Network Optimizations	1 lecture / week (3rd period of Mon., A1/A2 term)	online/face-to-face	D1～D3	△	This lecture is given in English.
Intelligent Society Workshop	around 2 days in total	online/face-to-face	Newcomers	○	
Orientation for new students	1 hour	online	Newcomers	○	

Elevator pitch workshop	1 day	online	Newcomers	○	
Monthly Meeting	about 2 hours / month	online	D1〜D3	○	
Research Presentation (Poster Session)	Half day / year	online/face-to-face	D1〜D3	○	
Meeting for Confirmation of Graduation	about 30 minits	online/face-to-face	D3	○	
Industry-academia collaboration internship ideathon	at any time	online/face-to-face	D1〜D3		
Industry-academia collaboration internship	at any time	online/face-to-face	D1〜D3		

*1 ○: Required to take, △: Required to take one of them

19　WINGS name: Quantum Science and Technology fellowship Program（WINGS-QSTEP）

Offered contents

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Q-STEP seminar	Occasional	online	D1〜D3	○	
Quantum Science Technology Overlook Lecture III	13 lectures	online	D1〜D3	○	

*1 ○: Required to take

20 WINGS name: Global Leadership Program for Social Design and Management（WINGS-GSDM）

Offered contents　　（Students are recommended to take one course each year from the categories of □①, □②, and □③. In no particular order.）

Content name	days / hours	online or face-to-face	Target grade	Requirement*1	Notes
Lecture：Social Design and Global Leadership	2 credits（S semester, Intensive lecture)	online or face-to-face	D1〜D3	□①	Students are recommended to take the course.
Lecture：Engineering Competency I - Project Based Learning-	2 credits（A semester・Thursday, 5th period)	online or face-to-face	D1〜D3	□②	Students are recommended to take either of the courses of □②.
Lecture：Case Study (Project Based Learning on the Technological Innovation and the Social Solutions)	2 credits（A semester・Intensive lecture)	online or face-to-face	D1〜D3	□②	
Lecture：Case Study (Social Design and Management)	2 credits (Intensive lecture, S semester)	online or face-to-face	D1〜D3	□③	Students are recommended to take one of the courses of □③.
Lecture：Engineering Competency II -Research Internship-	2 credits（All year・Intensive lecture)	online or face-to-face	D1〜D3	□③	
International Project（＝Application support for the GX Overseas Study Program, etc.)	at any time	online or face-to-face	D1〜D3	□③	
Student Initiative Project（Reference video: https://youtu.be/Sa0qG7hklBI）	at any time	online or face-to-face	D1〜D3	□③	