

Graduate Program to Foster Global Ecosystems

1. IGP (A) Outline

The primary aim of this program is to foster student excellence within “Global Ecosystems” and sophisticated educational plans by exposing students to the applied bioscience and technology that underpins bio-related and environmental industries and the other area to achieve “Sustainable Developing Goals”.

1-1. Graduate Majors available to IGP (A) Students

Graduate Major in Life Science and Technology

Graduate Major in Human Centered Science and Biomedical Engineering

2. Competencies Developed

[Integrated Master’s and Doctoral Degree]

To achieve the above objectives, this program students acquire the following skills.

- ✧ Advanced expertise in “Global Ecosystems”
- ✧ Advanced problem-setting and problem-solving skills underpinned by expertise and an ethical worldview
- ✧ Advanced sophistication and communicating skills required as international professionals

3. Learning Goals

To acquire the skills listed in “Competencies Developed”, students in this program will have the following trainings.

- A) Acquiring advanced expertise in the field of “Global Ecosystems”
Acquiring advanced expertise in the research field of “Global Ecosystems” through Research Seminars, Research-Related Courses, and Major Courses
- B) Acquiring the knowledge of a broad range of science and technology fields
Learning broad knowledge conducive to the development of science and technology through abundant Major Courses
- C) Acquiring research-executing skills, problem-setting skills, problem-solving skills, and innovative creativity
Acquiring research-executing, problem-setting, problem-solving, and academic writing skills as well as innovative creativity through Research Seminars, Research-Related Courses, and exercises and experiments in Major Courses
- D) Acquiring international communication skills
Learning advanced communication skills required as international professionals through Humanities and Social Science Courses, Career Development Courses, and Major Courses
- E) Cultivating sophistication in relation to bioethics and society
Learning ethical and social values relevant to life and research in “Life Science and Technology” through Humanities and Social Science Courses, Career Development Courses, and exercises and experiments in Major Courses

4. IGP (A) Completion Requirements and Courses

[For Master's Degree]

(1) Credits

- Outline of Human Centered Science and Biomedical Engineering I (1 credit)
- International Career Development Basics (2 credits)
- Institutional Training (2 credits)

Table M1. Courses of IGP(A)

Course category	Course number	Course title	Credits	Competencies	Learning goals	Comments
400 Level 500 Level	HCB.C421	⊙ Outline of Human Centered Science and Biomedical Engineering I	1-0-0	1,5	A	Bio and Environmental Industry Practice LST.A420
	LST.B404	⊙ International Career Development Basics	1-1-0	2,3,4,5	B, C, D, E	
	HCB.C481					
	LST.C401	⊙ Institutional Training	0-2-0	2,3	A, B, D, E	
HCB.C483						
Note: ⊙: Required course Competencies: 1 = Specialist skills; 2 = Intercultural skills; 3 = Communication skills; 4 = Critical thinking skills; 5 = Practical and/or problem-solving skills						

Under this program, in addition to the above-mentioned requirements, students must also fulfill the Graduate Major completion requirements of their departments (degree completion requirements). For completion requirements of your Graduate Major, please refer to the relevant Graduate Major pages in "Guide to Graduate Majors (for IGP)"

[For Doctoral Degree]

(1) Credits

- International Career Development Advanced (2 credits)

Table D1. Courses of IGP(A)

Course category	Course number	Course title	Credits	Competencies	Learning goals	Comments
600 level	LST.B605	⊙ International Career Development Advanced	1-1-0	1,2,3,4,5	B, C, D, E	
	HCB.C681					
Note: ⊙: Required course Competencies: 1 = Specialist skills; 2 = Intercultural skills; 3 = Communication skills; 4 = Critical thinking skills; 5 = Practical and/or problem-solving skills						

Under this program, in addition to the above-mentioned requirements, students must also fulfill the Graduate Major completion requirements of their departments (degree completion requirements). For completion requirements of your Graduate Major, please refer to the relevant Graduate Major pages in "Guide to Graduate Majors (for IGP)"

5. Outline of Graduate Major Requirements

Table M2. Graduate Major in Life Science and Technology Completion Requirements

Course category		<Required courses>Required credits	<Electives> Minimum credits required	Minimum credits required	Associated learning goals	Comments
Liberal Arts and Basic Science Courses	Humanities and Social Science Courses		<ul style="list-style-type: none"> • 2 credits from 400 level • 1 credit from 500 level 	5 credits	D, E	
	Career Development Courses		<ul style="list-style-type: none"> • 2 credits 		D, E	All Graduate Attributes (GA) should be acquired.
	Other Courses					
Core Courses	Research Seminars	<ul style="list-style-type: none"> •LST Seminar S1 •LST Seminar F1 •LST Seminar S2 •LST Seminar F2 <p>A total of 8 credits, 2 credits each from the above courses.</p>		20 credits from Core Courses of the Graduate Major standard curriculum	A, C	
	Research-Related Courses	<ul style="list-style-type: none"> •MS Qualifying Presentation 1 (1 credit) •MS Qualifying Presentation 2 (1 credit) •LST Directed Laboratory Work (2 credits) <p>A total of 4 credits</p>			A, C	
	Major Courses	<ul style="list-style-type: none"> •International Career Development Basics (2 credits) •Institutional Training (2 credits) <p>A total of 4 credits</p>	<ul style="list-style-type: none"> • 4 credits 		A, B, C, D, E	
	Major Courses and Research-Related Courses outside the Graduate Major in Life Science and Technology standard curriculum	<ul style="list-style-type: none"> •Outline of Human Centered Science and Biomedical Engineering I (1 credit). 				
Total required credits		A minimum of 30 credits including those attained according to the above conditions				
Note		<ul style="list-style-type: none"> • Japanese Language and Culture Courses offered to international students can be recognized as equivalent to the Humanities and Social Science Courses of the corresponding course level. • For details of the Liberal Arts and Basic Science Courses, please refer to the relevant sections. 				

Table M3. Graduate Major in Human Centered Science and Biomedical Engineering Completion Requirements

Course category		<Required courses> Required credits	<Electives> Minimum credits required	Minimum credits required	Associated learning goals	Comments
Liberal Arts and Basic Science Courses	Humanities and Social Science Courses		<ul style="list-style-type: none"> • 2 credits from 400 level • 1 credit from 500 level 	5 credits	D, F	
	Career Development Courses		<ul style="list-style-type: none"> • 2 credits 		D, F	All Graduate Attributes (GA) should be acquired.
	Other Courses					
Core Courses	Research Seminars	<ul style="list-style-type: none"> • HCB Seminar S1 • HCB Seminar F1 • HCB Seminar S2 • HCB Seminar F2 <p>A total of 8 credits, 2 credits each from the above courses.</p>		19 credits	C, E	
	Research- Related Courses	<ul style="list-style-type: none"> • Research Planning for Master Thesis I • Research Planning for Master Thesis II <p>A total of 2 credits</p>			C, E	
	Major Courses	<ul style="list-style-type: none"> • Interdisciplinary Research Fundamentals I (1 credit) • Interdisciplinary Research Fundamentals II (1 credit) • Interdisciplinary Research Training (2 credits) • Outline of Human Centered Science and Biomedical Engineering I (1 credit). • International Career Development Basics (2 credits) • Institutional Training (2 credits) <p>A total of 9 credits</p>			A, B, D, E	
	Major Courses and Research- Related Courses outside the Graduate Major in Human Centered Science and Biomedical Engineering standard curriculum					
Total required credits		A minimum of 30 credits including those attained according to the above conditions				
Note		<ul style="list-style-type: none"> • Japanese Language and Culture Courses offered to international students can be recognized as equivalent to the Humanities and Social Science Courses of the corresponding course level. • For details of the Liberal Arts and Basic Science Courses, please refer to the relevant sections. 				

Table D2. Graduate Major in Life Science and Technology Completion Requirements

Course category		<Required courses> Required credits	<Electives> Minimum credits required	Minimum credits required	Associated learning goals	Comments	
Liberal Arts and Basic Science Courses	Humanities and Social Science Courses		• 2 credits	6 credits	C, E		
	Career Development Courses		• 4 credits		C, E	All Graduate Attributes (GA) should be acquired.	
	Other Courses						
Core Courses	Research Seminars	<ul style="list-style-type: none"> • LST Seminar S3 • LST Seminar F3 • LST Seminar S4 • LST Seminar F4 • LST Seminar S5 • LST Seminar F5 <p>A total of 12 credits, 2 credits each from the above courses.</p>		18 credits	A, B, C, D		
	Research- Related Courses	<ul style="list-style-type: none"> • PhD Qualifying Presentation 1 • PhD Qualifying Presentation 2 <p>A total of 4 credits, 2 credits each from the above courses.</p>			A, B		
	Major Courses	<ul style="list-style-type: none"> • International Career Development Advanced (2 credits) 					
	Major Courses and Research- Related Courses outside the Graduate Major in Life Science and Technology standard curriculum						
Total required credits		A minimum of 24 credits including those attained according to the above conditions					
Notes		<ul style="list-style-type: none"> • Japanese Language and Culture Courses offered to international students can be recognized as equivalent to the Humanities and Social Science Courses of the corresponding course level. • For details of the Liberal Arts and Basic Science Courses, please refer to the relevant sections. 					

Table D3. Graduate Major in Human Centered Science and Biomedical Engineering Completion Requirements

Course category		<Required courses> Required credits	<Electives> Minimum credits required	Minimum credits required	Associated learning goals	Comments
Liberal Arts and Basic Science Courses	Humanities and Social Science Courses		• 2 credits	6 credits	D, F	
	Career Development Courses		• 4 credits		D, F	All Graduate Attributes (GA) should be acquired.
	Other Courses					
Core Courses	Research Seminars	<ul style="list-style-type: none"> • HCB Seminar S3 • HCB Seminar F3 • HCB Seminar S4 • HCB Seminar F4 • HCB Seminar S5 • HCB Seminar F5 <p>A total of 12 credits, 2 credits each from the above courses.</p>		18 credits	C, E	
	Research- Related Courses	<ul style="list-style-type: none"> • Research Planning for Doctoral Thesis I • Research Planning for Doctoral Thesis II <p>A total of 4 credits, 2 credits each from the above courses.</p>			C, E	
	Major Courses	<ul style="list-style-type: none"> • International Career Development Advanced (2 credits) 			A, B, D, E	
	Major Courses and Research- Related Courses outside the Graduate Major in Human Centered Science and Biomedical Engineering standard curriculum					
Total required credits		A minimum of 24 credits including those attained according to the above conditions				
Notes		<ul style="list-style-type: none"> • Japanese Language and Culture Courses offered to international students can be recognized as equivalent to the Humanities and Social Science Courses of the corresponding course level. • For details of the Liberal Arts and Basic Science Courses, please refer to the relevant sections. 				