For entrants in FY 2020

such as a company, college, and public organization.

-	

skills related to the natural phenomena generated by organic molecule, cell, individual organisms, and population that constitute the foundation of the applied biology to develop human resources who are capable of working as a scientist in

(8	8) Systematic and hierarchical knowledge and understanding regarding physiology of microorganisms, plants, and
	animals and functionality of living bodies from the level of molecule and cell to that of the individual organism and
	ecosystem;

- (9) Data collection and analysis capabilities and systematic skills for research in the academic fields regarding molecule, cell, functionality of living bodies, and ecosystem and ability to practically use and apply those fundamental skills; and
- $(10) \ \ Capability \ \ of \ \ applying \ \ such \ \ as \ Tm0 \ g \ g0 \ G[\ Tm0 \ 00 \textcircled{6}0 \textcircled{8}00 \textcircled{C}()3(ear).3 \textcircled{5})-10(t) \textcircled{5}0 \)-10(t) \textcircled{5}hat) 6 \ of) 3(\ \ ,\textcircled{5}0\)7. \textcircled{8}))17($

(3) The "specialized subjects" provided in the specialized education in this Program are categorized in "base subjects" in which students study molecular biology regarding organic molecule, cell, individual organism, and population and "advanced subjects"" in which the molecule biology is applied and developed to provide systematic education with continuity. They aim to develop capabilities for understanding natural phenomena from the view point of molecular biology and developing the understanding for practical science. In addition to that, this Program provides subjects of "exercise and practicum" in which Problem-based Learning (PBL) is conducted for identifying and solving problems to allow students to acquire skills and attitudes that he/she can widely use and apply in areas of agricultural science. In addition to that, students develop general capabilities for problem solving including skills for communication, presentation, and practical foreign language capability while preparing his/her "graduation thesis."

_

Students study the fundamental subjects for one year after entering the university to acquire the basic knowledge required for studying the expertise. Then they mainly study the specialized fundamental subjects common for the all students of School of Applied Biological Science in the second semester of the second year. Particularly, they take the subjects of Laboratory Work in General Chemistry, Laboratory Work in General Physics, and Laboratory Work in General Biology I & II (including computer exercise) as those regarding experiments that are common for all students of the School of Applied Biological Science that consist of to get basic training for experiments in a wide area that is commonly required for the students of the School of Applied Biological Science. Students acquire a wide range of intelligence, capability in foreign languages such as English, data processing skills, basic knowledge common for the students of the School of Applied Biological Science, understanding for bioethics and ethics of science by the first semester of the second year to allow themselves to understand the aim and characteristics of each major program and select the most appropriate program.

Available qualification							
(1) Educational personnel certification: Type 1 License for High School Teacher (science)							
7.							
		8.					
-							
-							
-							
	1						
	-						
	-						
	-						
9.							
-							

4.0			
10.			

								Year	in wh	ich th	e subje	ect is t	aken			
	Subject type		Required			Type of	1 st g	rade	2 nd g	rade	3 rd g	rade	4 th g	rade		
Type			No. of credits	Class subjects	No. of credits	course registration	Springs	Fall	Springs	Fall	Springs	Fall	Springs	Fall		
	Pea	ace S	cience	Courses	2		2	Required								
	Basic Courses in		oduct for Fi	ory Seminar irst-Year idents	2	Introductory Seminar for First-Year Students	2	Required								
	Basic	Uni		uction to y Education	2	Introduction to University Education	2	Required								
				Basic		Communication Basic I	1									
			te2)	English Usage	2	Communication Basic II	1	Required Required								
			English(Note2)	Communic	2	Communication I A	1									
				ation I	2	Communication I B	1									
		ses	Eı	Communic	2	Communication II A	1	Required								
		ıgnaş		ation II	_	Communication II B	1									
ıtion	cts	Foreign Languages	3.7	F 11.1		Basic Foreign Language I	1									
	Common Subjects	Fore	rore	_		Basic Foreign Language II	1	Elective								
ts Educa	Comme		(Sele	guages ct one	4	Basic Foreign Language III	1	Required								
Liberal Arts Education			language)			Basic Foreign Language IV	1									
T	Information, Date Science Courses			2	(Note3)	2	Required									
			Area Courses		9	(Note4)	1 or 2	Elective/ Required								
		Н		and Sports	2	(Note5)	1 or 2	Elective Required								
						Basic Calculus or Elements of Calculus (Note6)	2									
						Organic Chemistry	2									
	177	ound	ation 4	Courses	14	Species Biology	2	Required								
		ound	ation (Courses	14	Cell Science	2									
						General Chemistry or										
						Basic Concepts of	2									
						Chemistry (Note7)										
						4 subjects from	1 for	Elective								

		"Experimental	each	Required				
		Methods and	subject	required				
		Laboratory Work in	subject					
		Physics I",						
		"Experimental						
		Methods and						
		Laboratory Work in						
		Physics II",						
		"Experimental						
		Methods and						
		Laboratory Work in						
		Chemistry I",						
		"Experimental						
		Methods and						
		Laboratory Work in						
		Chemistry II",						
		"Experimental						
		Methods and						
		Laboratory Work in						
		Biology I",						
		"Experimental						
		Methods and						
		Laboratory Work in						
		Biology II"(Note8)						
Total	44							

- Note 1: The year indicated with a circle mark represents that in which students typically take the subject. The year with a double circle mark indicates the year in which students are highly recommended to take the subject. Students are allowed to take the subject in any year after that indicated with a circle or double circle mark. It is required to confirm the semester in which the subject is provided in the class schedule for liberal arts education subjects in the Students' Handbook because some subjects might be provided in different semester from that which is provided in this document.
- Note 2: The credit for "Field Research in the English-speaking World" that is earned through such as a short-term study abroad and that for "Online English Seminar I," "Online English Seminar II," and "Online English Seminar III" that is earned through a self-study, are accepted as the credit for English required for graduation. Achievement in a foreign language skill test and language training might be accepted as a credit. For further information, refer to the description regarding English subjects in the liberal arts education and the item "Credit based on Achievement in Foreign Language Skill Test" in the Students Handbook.

(PP. 30 - 31, Liberal Arts)

- Note 3: For the information, Data Science subject, it is required to take the subject "Elements of Information Literacy" that is provided in the first semester in the first year. Only when failing to earn the credit for "Elements of Information Literacy," is it allowed to take the subject "Exercise in Information Literacy" that is provided in the second semester in the first year.
- Note 4: It is required to earn 4 credits or more for the natural science subjects and 4 credits or more for the human & social science subjects.

However, "Fundamentals of Biology" of the natural science subjects is a subject for which students are requested to take if he/she did not take biology subjects in the entrance exam (including the University Testing Center Examination).

For the other students, the credit for the subject "Fundamentals of Biology" is not accepted as that for graduation.

It is allowed to include up to 4 credits for society-related subjects as credits for the Human & Social Science Subjects.

- Note 5: For health & sports subjects, it is recommended to take a practicum in sports.
- Note 6: Students who studied Mathematics III in high school are required to take the subject "Basic Calculus." Students who did not study Mathematics III in high school are required to take the subject "Elements of Calculus."
- Note 7: Students who did not take chemistry subjects in the entrance exam (including the University Testing Center Examination) are required to take the subject "Basic Concepts of Chemistry." For those students, the credit for the subject "General Chemistry" is not accepted for graduation.

For students who take chemistry subjects, the credit for the subject "Basic Concepts of Chemistry" is not

accepted for graduation.

Note 8: It is required to select two combinations of subjects from the following to earn credits for them: "Experimental Methods and Laboratory Work in Physics II"; "Experimental Methods and Laboratory Work in Chemistry I" and "Experimental Methods and Laboratory Work in Chemistry II"; and "Experimental Methods and Laboratory Work in Biology II" and "Experimental Methods and Laboratory Work in Biology II."

R c d Pceg g b b cag g cb b c hca

ce g c F b fc ga agc ac e gcb g b agc ac e b

agc ac e gdc agc ac e

						Ye	ar in w	hich th	e subje	ct is tal	ken	
		Required			1 st g	rade	2 nd g	grade	3 rd g	rade	4 th g	rade
Туре	Subject type	No. of credits	Class subjects	No. of credits	Springs	Fall	Springs	Fall	Springs	Fall	Springs	Fall
			Introduction to Applied	2								
			Biological Sciences									
			Introduction to	2								
			Microbiology									
			Introduction to Molecular	2								
			Biochemistry									
			Agricultural Production	2								
	hca		Resources									
	Ē.		Physics for Applied	2								
hca			Biological Science									
	O		Ethics of Science and	2								
cb	<u>.</u>	24	Technology									
90			Statistics in Biology	2								
cag	cb		Environmental Sciences	2								
	50		for Bioproduction									
	cag		Laboratory Work in	1								
			General Biology I									
			Laboratory Work in	1								
			General Biology II									
			Laboratory Work in	1								
			General Chemistry									
			Laboratory Work in	1								
			General Physics									
			Requi	red Subj	ects:	Tota	al 20	credit	ts			

	Seminar in Field Science	2								
	Research Front of									
	Applied Biological	2								
	Sciences									
	Introduction to	2								
	Physiology									
	Public Health	2								
		Elective	Requi	red Su	ibjects	;				
	Ta	ke 4 credi	ts fron	n abov	e subj	ects				
	(Redundant credits over 4	credits	move	to E	lective	Subj	ects in	each]	Progra	ım)

Table of Registration Standards(Specialized Subjects)

(Molecular Agro-Life Science Program)

						Yea	r in w	hich th	ne subj	ect is ta	aken	
		Required No.		No. of	1 st gı	rade	2 nd g	rade	3rd	grade	4 th gr	rade
Туре	Subject type	of credits	Class subjects	credits	Springs	Fall	Springs	Fall	Springs	Fall	Springs	Fall
			Genome Science I	2				\circ				
			Genome Science II	2				\bigcirc				
			Bioorganic Chemistry	2				\bigcirc				
			Chemistry of Natural Organic	2				\bigcirc				
			Compounds									
			Molecular Cell Biology	2				\bigcirc				
			Bio-Analytical Science	2				\bigcirc				
			Reading of Foreign Literature	2				\bigcirc				
			in Molecular Agro-Life Science									
cts	cts		Laboratory Work in Molecular	1				\circ				
ubje	ubje		Agro-life Science I									
Specialized Subjects	Specialized Subjects	56	Laboratory Work in Molecular	1				\circ				
ializ	xializ		Agro-life Science II									
Spec	Spec		Laboratory Work in Molecular	1				\circ				
			Agro-life Science III									
			Systemic Life Science	2				\circ				
			Problem Based Learning for	1					0			
			Molecular Agro-Life Science I									
			Problem Based Learning for	1					0			
			Molecular Agro-Life Science II									
			Graduation Thesis I	2						0		
			Graduation Thesis II	2							0	
			Graduation Thesis III	2								0
			Requir	red Subjects	: Total	1 27cı	redits					

Results of study in Food Science Program Relation between evaluation items and evaluation criteria

		Excellent	Very Good
(1)	Ability for comprehensive and cross-disciplinary thinking and knowledge / understandings required to see a phenomena from a broad, top-down perspective and to take action for solving problems regarding the specialized area.	Has superior ability for comprehensive and cross-disciplinary thinking and capability to see a phenomenon from a broad, top-down perspective and to take action for solving problems regarding the specialized area.	Has sufficient ability for comprehensive and cross-disciplinary thinking and capability to see a phenomenon from a broad, top-down perspective and to take action for solving problems regarding the specialized area.
(2)	Basic knowledge and understanding required for acquiring exp3flise3(ti)4(o)-584.	Has fundamental knowledge and profound understanding required for acquiring expertise, and is capable of explaining this knowledge while Has basic knowledge of areas regarding organic	Has fundamental knowledge and profound understanding required for acquiring expertise, and is capable of sufficiently explaining this knowledge
(3)	Knowledge and understanding regarding organic molecule, cell, individual organism, and population		

				0 11 0 11 1 1 0 1 1 1 1	0 11 0 11 1 10 1 1 1 1
	_		Ability to collect information related to	•	Capable of collecting information related to
	E		peripheral disciplines to complement the	peripheral disciplines to complement the knowledge	peripheral disciplines to complement the knowledge
	_ θ		knowledge regarding the specialized area	regarding the specialized area, comprehensively	regarding the specialized area, comprehensively
	€ m		and comprehensively consider functions of	considering functions of organic molecule, cell,	considering functions of organic molecule, cell,
	a ည	` '	organic molecule, cell, individual organism,	· ·	individual organism, and population from view
	۲ ۲			points related to molecules, explaining to others, and	points related to molecules, and explaining to others.
	a		molecules	applying the information.	
	Ð.				
	i h		Ability to organize own ideas, demonstrate	Capable of organizing own ideas, demonstrating	Capable of organizing own ideas, demonstrating
	i e		comprehension based on those ideas,	comprehension based on those ideas, logically	comprehension based on those ideas, logically
	¦ n		logically represent own conclusion orally or	representing own conclusion orally or in a	representing own conclusion orally or in a
	្ន ទ	(2)	in a document, and exchange ideas in areas	document, and exchanging advanced ideas in areas	document, and sufficiently exchanging ideas in areas
	Ţi	(2)	in which themes regarding functions of	in which themes regarding functions of organic	in which themes regarding functions of organic
	У _У		organic molecule, cell, individual organism,	molecule, cell, individual organism, and population	molecule, cell, individual organism, and population
	е		and population are discussed from view	are discussed from view points related to molecules.	are discussed from view points related to molecules.
- 1			points related to molecules.		

Role of liberal arts education in this program

The liberal arts education in this program aims to build both the language skills and the academic foundation required for the specialized educatic autonomously and a scientific intelligence based on the ability to collect, analyze and criticize data, but also language skills that allow the student tenhances insight from a broad perspective for the essentials and the background of phenomena, and the linguistic ability and concern for peace whi students to acquire the ability to integrate findings and establish a "knowledge system" that is really useful for problem solving, and to examine photonic integrated knowledge.

Good

Has basic ability for comprehensive and cross-disciplinary thinking and capability to see a phenomenon from a broad, top-down perspective and to take action for solving problems regarding the specialized area.

Has fundamental knowledge and profound understanding required for acquiring expertise, and is capable of providing basic explanation of this

Has basic knowledge and understandings of areas regarding organic molecule, cell, individual organism, and population.

Has basic ability in all the elements regarding communication, information processing, and physical activities required for acquiring expertise.

Generally has sufficient basic experimentation abilities and skills required for acquiring expertise, and is capable of supporting their execution.

Has intellectual ability and techniques in areas regarding organic molecule, cell, individual organism, and population.

Has a basic ability for reading English texts and capable of understanding technical manuals.

Capable of collecting information related to peripheral disciplines to complement the knowledge regarding the specialized area and comprehensively considering functions of organic molecule, cell, individual organism, and population from view points related to molecules.

Capable of organizing own ideas, demonstrating comprehension based on those ideas, logically representing own conclusion orally or in a document, and exchanging ideas in areas in which themes regarding organic molecule, cell, individual organism, and population are discussed from view points related to molecules.

on. It develops not only a capability for studying o exchange ideas with others in English. Also, it ich are required for a citizen of the world. It enables enomena using a top-down perspective based on

					Evalu	ation i	tem																
Subject	Name of class	Numbe		Semester when the class is	Know			erstan	ding		Abilit	y & sk	cills						Comp	orehens oility	sive		Total of weightings for
category	subject	r of credits	or Electivee	provided	(1)		(2)		(3)		(1)		(2)		(3)		(4)		(1)		(2)		evaluation
		credits		F	Weighti ng for evaluati on item for the subject		Weighti ng for evaluati on item for the subject		Weighti ng for evaluati on item for the subject	Weighti ng for evaluati on item	Weighti ng for evaluati on item for the subject	Weighti ng for evaluati on item	Weighti	Weighti ng for evaluati on item	Weighti ng for evaluati on item for the subject	Weighti ng for evaluati on item	Weighti	Weighti ng for evaluati on item	Weighti	Weighti ng for evaluati on item	Weighti ng for evaluati on item for the subject	Weighti ng for evaluati on item	items for the subject
Liberal arts education subjects	Peace Science Courses	2	Required	1st - 4th semesters	100	1																	100
Liberal arts education subjects	Introductory Seminar for First-Year Students	2	Required	1st semester	100	1																	100
Liberal arts education subjects	Introduction to University Education	2	Required	1st semester	100	1																	100
Liberal arts education subjects	Foreign Languages	10	Required / Elective required	1st - 2th semesters							100	1											100
Liberal arts education subjects	Information Courses	2	Required	1st semester							100	1											100
Liberal arts education subjects	Area Courses	10	Elective required	1st - 6th semesters	100	1																	100
Liberal arts education subjects	Health and Sports Courses	2	Elective required	1st - 2nd semesters							100	1											100
Liberal arts education subjects	"Basic Calculus" or "Elements of Calculus"	2	Required	1st semester			100	1															100
Liberal arts education subjects	Organic Chemistry	2	Required	2nd semester			100	1															100
Liberal arts education subjects	Species Biology	2	Required	2nd semester			100	1															100
Liberal arts education subjects	Cell Science	2	Required	2nd semester			100	1															100
Liberal arts education subjects	"General Chemistry" or "Basic Concepts of Chemistry"		Required	1st semester			100	1															100
Liberal arts education subjects	"Experimental and Laboratory Work in Physics I" and "Experimental Methods and Laboratory Work in Physics II"	2	Elective required	1st - 3rd semesters									100	1									100

Liberal arts education subjects	"Experimental and Laboratory Work in Chemistry I" and "Experimental Methods and Laboratory Work in Chemistry II"	2	Elective required	1st - 3rd semesters								100	1					100
Liberal arts education subjectsLiberal arts education subjects	"Experimental Methods and Laboratory Work in Biology I" and "Experimental Methods and Laboratory Work in Biology II"	2	Elective required	1st - 3rd semesters								100	1					100
Specialized subjects	Introduction to Applied Biological Science	2	Required	1st semester			100	1										100
Specialized subjects	Introduction to Microbiology	2	Required	1st semester			100	1										100
Specialized subjects	Introduction to Molecular Biochemistry	2	Required	2nd semester	60	1			40	1								100
Specialized subjects	Agricultural Production Resources	2	Required	2nd semester\			100	1										100
Specialized subjects	Physics for Applied Biological Science	2	Required	2nd semester			100	1										100
Specialized subjects	Ethics of Science and Technology	2	Required	2nd semester			100	1										100
Specialized subjects	Statistics in Biology	2	Required	3rd semester			100	1										100
Specialized subjects	Environmental Sciences for Bioproduction	2	Required	3rd semester			100	1										100
Specialized subjects	Laboratory Work in General Biology I	1	Required	3rd semester								100	1					100
Specialized subjects	Laboratory Work in General Biology II	1	Required	3rd semester								100	1					100
Specialized subjects	Laboratory Work in General Chemistry	1	Required	3rd semester								100	1					100
Specialized subjects	Laboratory Work in General Physics	1	Required	3rd semester								100	1					100
Specialized subjects	Seminar in Field Science	2	Elective required	2nd semester			100	1										100
Specialized subjects	Research Front of Applied Biological Sciences	2	Elective required	2nd semester	100	1												100
Specialized subjects	Introduction to Physiology	2	Elective required	3rd semester			100	1										100
Specialized subjects	Public Health	2	Elective required	6th semester		_	100	1			_		_					100
Specialized subjects	Genome Science I	2	Required	4th semester					100	1								100
Specialized subjects	Genome Science II	2	Required	4th semester					100	1								100
Specialized subjects	Bioorganic Chemistry	2	Required	4th semester					100	1								100

subjects Specialized subjects	100												100			4.4		2	Chemistry of natural	Specialized
Specialized spheres Specialized subjects Specialized Spec	100											1	100			4th semester	Required	2		subjects
Specialized subjects Specializ	100											1	100			4th semester	Required	2	Molecular Cell Biology	subjects
Specialized subjects Agro-Life Science Agro-Life Science Agro-Life Science Specialized subjects Specia	100											1	100			4th semester	Required	2		
Specialized subjects Socience I Specialized subjects Speci	100					1	100									4th semester	Required	2	Literature in Molecular Agro-Life Science	
Specialized subjects	100							1	100							4th semester	Required	1	Molecular Agro-life Science I	
Specialized subjects	100							1	100							4th semester	Required	1	Molecular Agro-life Science II	
Specialized subjects Specializ	100							1	100							4th semester	Required	1	Molecular Agro-life	subjects
Specialized subjects Science I 1 Required 5th semester 100 1 100 1 100 1 100 1 1	100											1	100			4th semester	Required	2	Systemic Life Science	
Specialized subjects Specializ	100							1	100							5th semester	Required	1	for Molecular Agro-Life	
subjects Graduation Thesis II 2 Required 6th semester 100 1 100 1 100 1 100 1 1	100							1	100							5th semester	Required	1	for Molecular Agro-Life	
subjects Graduation Thesis II 2 Required 6th semester 100 1 100 1 100 1 100 1 1																				
Specialized subjects	100	1	100													6th semester	Required	2	Graduation Thesis I	subjects
Specialized subjects Graduation Thesis III 2 Required 8th semester 100 1 100 1 100 1 100 1 1	100	1	100													7th semester	Required	2	Graduation Thesis II	subjects
Specialized subjects Reproductive Biology 2 Elective required subjects Specialized subjects Plant Molecular Biology 2 Elective required required subjects Plant Molecular Biology 2 Elective required required required subjects Plant Molecular Biology 2 Elective required re	100	1	100													8th semester		2	Graduation Thesis III	subjects
Subjects Reproductive Biology 2 required required subjects 100 1 Specialized subjects Plant Molecular Biology 2 Elective required required subjects 100 1 Specialized Specialized Food Microbiology 2 Elective required subjects 100 1	100											1	100			5th semester		2	Cell Technology	subjects
Specialized subjects Plant Molecular Biology 2 Elective required 5th semester 100 1 100 1 100 1 100 1 1	100											1	100			5th semester		2	Reproductive Biology	
	100											1	100			5th semester	Elective	2	Plant Molecular Biology	Specialized
subjects required required 1	100											1	100			5th semester	Elective required	2	Food Microbiology	Specialized subjects
Specialized Bioresource Utilization 2 Elective required 5th semester 100 1	100											1	100			5th semester		2		
Specialized Flority	100											1	100			5th semester	Elective	2	İ	Specialized
Specialized Floring	100											1	100			5th semester	Elective	2	Biofunctional Chemistry	Specialized
Secription Floring	100											1	100			5th semester	Elective	2	Pathology	Specialized
Specialized Applied Extremorbilio Elective	100											1	100			5th semester	Elective	2		Specialized
Capitalized Animal Proding and Elective	100											1	100			6th semester	Elective	2	Animal Breeding and	Specialized
Specialized Food Biochemistry 2 Elective 6th computer 100 1	100			1	100											6th semester	Elective	2		Specialized
subjects Food Hygiene 2 Elective 6th semester 100 I I I I	100			1	100											6th semester		2	Food Hygiene	
cubacte required	100																Elective			

Attachment 4

Curriculum map for Food Science Program

ac	Study achievementStudy hievementStudy achievement	1st	year	2nd	year	3rd	year	4th y	/ear
	Evaluation items	1st semester	2nd semester	3rd semester	4th semester	5th semester	6th semester	7th semester	8th semester
	①Ability for comprehensive and cross-disciplinary thinking and	Seminar for developing intelligence (◎)							
	knowledge / understandings	Introduction to University Education (◎)	Research Front of Applied Biological Sciences (O)						
	· ·	Peace Science Courses (©)	Introduction to Molecular Biochemistry(©)						
		Basic Calculus /	1	Area Courses Environmental	subjects (O)				
14		Elements of Calculus	Organic Chemistry (©)	Sciences for Bioproduction(©)			Public Health(O)		
K n o		General Chemistry / Basic Concepts of Chemistry (②)	Cell Science (©)	Statistics in Biology (©)					
w I e d		Introduction to Applied Biological Science(©)	Species Biology (©)						
g e	②Basic knowledge and understanding required for acquiring expertise	Introduction to Microbiology ()		Introduction to Physiology (O)					
&			Physics for Applied Biological Science(©)						
u n d e			Ethics of Science and Technology(②)						
r s t			Seminar in Field Science (O)						

a n d			Introduction to Molecular Biochemistry(©)		Genome Science I	Cell Technology(O)	Animal Breeding and Genetics (O)	
i n g					Genome Science II	Reproductive Biology		
	③Knowledge and				Bioorganic Chemistry (©)	Plant Molecular Biology(O)		
	understanding regarding organic molecule, cell, individual organism, and				Chemistry of natural organic compounds ((©))	Food Microbiology		
	population				biology (@)	Bioresource Utilization Science (O)		
					Bio-Analytical Science	Nutrition(O)		
						Biofunctional Chemistry(O)		
						Pathology (O)		
						Applied extremophilic life science(O)		
		健康スポー	-ツ科目(O)					
	①Basic ability in communication, information processing, and physical	情報科目(◎)						
	activities required for acquiring expertise		目(◎, 〇)					
A b i I		Work in Physics I' Methods and Laborato (O)"Experimental M	hods and Laboratory ' and "Experimental ory Work in Physics II" fethods and Laboratory ' and "Experimental hods and Laboratory					
t i e s	②Basic experimentation abilities and skills required for acquiring expertise	Work in Chemistry Methods and Laborate II" (O)"Experim Laboratory Work	hods and Laboratory I" and "Experimental ory Work in Chemistry ental Methods and in Chemistry I" and hods and Laboratory	Laboratory Work in General Chemistry (③)				

S		"Experimental Metho Work in Biology I"	•	Laboratory Work in General Physics (©)				
i					Molecular Agro-life	Problem Based Learning for Molecular Agro-Life Science I(©)		
	③Intellectual ability and techniques in study fields regarding organic molecule, cell, individual organism, and population				Molecular Agro-life	Problem Based Learning for Molecular Agro-Life Science II(③)		

				Laboratory Work in Molecular Agro-life Science III(⊚)			
	4)Ability regarding scientific			Reading of Foreign			
	English that is required as a basis			Literature in			
	for understanding technical			Molecular Agro-Life			
n	1)Ability to collect information						
s	related to peripheral disciplines to				Food Biochemistry(O)		
Ιi	complement the knowledge				. 000 2.000		
1	regarding the specialized area and						
٧	comprehensively consider				F 111 : (0)		
е	functions of organic molecule,				Food Hygiene(O)		
	cell, individual organism, and						
C	population from view points				Aquaculture I(O)		
	(Z)Apility to organize own	1			Graduation Thesis I		Graduation Thesis III
а	idaaa damaanatuuta				(<u>@</u>)	(<u>@</u>)	(<u>@</u>)

. 0

(Example) Liberal arts subjects Specialized fundament Specialized subjects Graduation thesis (②) Required subjects (Ο) Elective required (Δ) Elective subjects

List of Faculty Members of the Applied Animal and Plant Science Program

Name of faculty	Name of program and position	Extension number	Laboratory	Mail address
	Professor			@
				@
	Professor			@
				@