3.5. Course List of Biosciences Major

3.5.1. Master's Program (For students entering in 2020 and after)

Code		Course Title	Credits	Year	Semester	Class instructors	Remark
○**Elective Courses (14 credits or more)** ***including 2 credits of required courses and 4 credits of elective courses in the field of your choice**							
<Biomolecular Sciences Field>							
BIOS500	Field Required	Introduction to Biomolecular Sciences	2	1・2	Spring	IKEGUCHI Masamichi GODA Shuichiro MARUTA Shinsaku FUJIWARA Kazuo	*ET
BIOS501	Field Elective	Structural Dynamics of Biomolecules	2	1・2	Fall	IKEGUCHI Masamichi	*ET
BIOS502		Bionanotechnology	2	1・2	Fall	MARUTA Shinsaku	*ET
BIOS503		Computational Protein Science	2	1・2	Spring	FUJIWARA Kazuo	*ET
BIOS504		Protein Functions	2	1・2	Fall	GODA Shuichiro	*ET
BIOS505		Advanced Enzymology	2	1・2	Spring	GODA Shuichiro	*ET
<Cellular Biosciences Field>							
BIOS510	Field Required	Introduction to Cellular Biosciences	2	1・2	Spring	TAKASE Sayaka NISHIHARA Shoko IKEGUCHI Masamichi TOGAYACHI Akira	*ET
BIOS511	Field Elective	Glycobiology	2	1・2	Spring	NISHIHARA Shoko	*ET
BIOS512		Virology	2	1・2	Spring	TAKASE Sayaka	*ET
BIOS513		Advanced Molecular Biology	2	1・2	Fall	TOGAYACHI Akira	*ET
BIOS514		Microbial Ecology	2	1・2	Fall	NISHIHARA Shoko TAKASE Sayaka	
<Bioinformation Sciences Field>							
BIOS530	Field Required	Introduction to Bioinformation Sciences	2	1・2	Spring	KINOSHITA Kyoko MARUTA Shinsaku SEKI Atsushi FUJIWARA Kazuo	*ET
BIOS532	Field Elective	Bioinformatics Topics	2	1・2	Spring	KINOSHITA Kiyoko	*ET
BIOS533		Bioinstrumentation	2	1・2	Fall	SEKI Atsushi	*ET(O)
BIOS534		Biomimetics	2	1・2	Spring	MARUTA Shinsaku SEKI Atsushi	*ET
BIOS535		Structural Proteomics	2	1・2	Fall	FUJIWARA Kazuo	
<Functional Biosciences Field>							
BIOS540	Field Required	Introduction to Functional Biosciences	2	1・2	Spring	NISHIHARA Shoko TAKASE Sayaka MARUTA Shinsaku TOGAYACHI Akira KAWAI Hideki	*ET
BIOS541	Field Elective	Neurogliology	TBD	TBD	TBD		*ET
BIOS542		Neurobiology of Learning and Development	2	1・2	Fall	KAWAI Hideki	*ET
BIOS543		Science of Neurological Disorders	TBD	TBD	TBD		
BIOS544		Neurophysiology	2	1・2	Spring	KAWAI Hideki	*ET
BIOS545		Immunology	2	1・2	Fall	TOGAYACHI Akira	*ET
<Common courses>							
BIOS550	Advanced Instrumental Analysis 1		2	1・2	Spring	IKEGUCHI Masamichi	*ET(O)
BIOS551	Advanced Instrumental Analysis 2		2	1・2	Summer Intensive	SHIMIZU Akira	
BIOS552	Advanced Instrumental Analysis 3		2	1・2	Winter Intensive	TODA Tatsuki MATSUYAMA Tatsushi	
BIOS560	Special Lectures 1		2	1・2	Intensive	NISHIHARA Shoko KAWAI Hideki IKEGUCHI Masamichi KINOSHITA Kiyoko	
BIOS561	Special Lectures 2		2	1・2	Intensive	NISHIHARA Shoko KAWAI Hideki IKEGUCHI Masamichi KINOSHITA Kiyoko	
BIOS562	Internship in Graduate Course 1		2	1・2	Intensive	NISHIHARA Shoko KAWAI Hideki IKEGUCHI Masamichi KINOSHITA Kiyoko	
BIOS563	Internship in Graduate Course 2		2	1・2	Intensive	NISHIHARA Shoko KAWAI Hideki IKEGUCHI Masamichi KINOSHITA Kiyoko	

Code	Course Title	Credits	Year	Semester	Class instructors	Remark
○Required Courses (17 credits)　*16 credits are required for students entering in 2020-2021, excluding "Research Ethics"						
BIOS570	Research Ethics	1	1	Spring	KAWAI Hideki IYOTA Taketoshi	*ET *1
BIOS600	Advanced Seminar in Biosciences 1	2	1	Sp/Fall	Each Supervisor	
BIOS601	Advanced Seminar in Biosciences 2	2	1	Sp/Fall	Each Supervisor	
BIOS602	Advanced Seminar in Biosciences 3	2	2	Sp/Fall	Each Supervisor	
BIOS603	Advanced Seminar in Biosciences 4	2	2	Sp/Fall	Each Supervisor	
BIOS604	Advanced Research in Biosciences 1	2	1	Sp/Fall	Each Supervisor	
BIOS605	Advanced Research in Biosciences 2	2	1	Sp/Fall	Each Supervisor	
BIOS606	Advanced Research in Biosciences 3	2	2	Sp/Fall	Each Supervisor	
BIOS607	Advanced Research in Biosciences 4	2	2	Sp/Fall	Each Supervisor	

*1: Research Ethics [BIOS570] is a course offered for students entering in 2022; students in 2020–2021 are not required to take this course.

※The "*ET" in the Remarks indicates that the course is an English Track course; an "E" or "O" after "ET" indicates that the course is offered as an English Track course in an even or odd year in the Western calendar. Courses with "*ET" may be offered in Japanese if there are no students enrolled in the English Track.

3.5.2. Doctoral Program (For students entering in 2020 and after)

Code	Course Title	Credits	Year	Semester	Class instructors	Remark
○Required Courses (32 credits)						
BIOS720	Practical Course in Data Analyses	2	1	Spring	Doctoral Program Faculty	
BIOS721	Technical Writing in English	2	1	Fall	KINOSHITA Kiyoko	
BIOS722	Topics in Biosciences 1	2	2	Spring	Doctoral Program Faculty	
BIOS723	Topics in Biosciences 2	2	2	Fall	Doctoral Program Faculty	
BIOS700	Advanced Seminar in Biosciences 5	2	1	Sp/Fall	Each Supervisor	
BIOS701	Advanced Seminar in Biosciences 6	2	1	Sp/Fall	Each Supervisor	
BIOS702	Advanced Seminar in Biosciences 7	2	2	Sp/Fall	Each Supervisor	
BIOS703	Advanced Seminar in Biosciences 8	2	2	Sp/Fall	Each Supervisor	
BIOS704	Advanced Seminar in Biosciences 9	2	3	Sp/Fall	Each Supervisor	
BIOS705	Advanced Seminar in Biosciences 10	2	3	Sp/Fall	Each Supervisor	
BIOS706	Advanced Research in Biosciences 5	2	1	Sp/Fall	Each Supervisor	
BIOS707	Advanced Research in Biosciences 6	2	1	Sp/Fall	Each Supervisor	
BIOS708	Advanced Research in Biosciences 7	2	2	Sp/Fall	Each Supervisor	
BIOS709	Advanced Research in Biosciences 8	2	2	Sp/Fall	Each Supervisor	
BIOS710	Advanced Research in Biosciences 9	2	3	Sp/Fall	Each Supervisor	
BIOS711	Advanced Research in Biosciences 10	2	3	Sp/Fall	Each Supervisor	

3.6. Instructors teaching research guidance courses

Field	Name		Remark
Biomolecular Sciences	Professor	IKEGUCHI Masamichi	
	Professor	MARUTA Shinsaku	
	Professor	GODA Shuichiro	
	Associate professor	FUJIWARA Kazuo	
Cellular Biosciences	Professor	NISHIHARA Shoko	
	Professor	TAKASE Sayaka	
	Professor	TOGAYACHI Akira	
Bioinformation Sciences	Professor	KINOSHITA Kiyoko	
	Professor	SEKI Atsushi	Master's Program Only
Functional Biosciences	Professor	KAWAI Hideki	