

Curriculum List (Undergraduate program)

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit (Assignment)	Semester	Note
Mandatory Basic	BS110	21.110	Basic Biology	3:0:3		
	BS120	21.120	General Biology	3:0:3	Spring, Fall	
Elective Basic	BS122	21.122	Diversity of Life	2:3:3	Fall	
Mandatory Major	BS200	21.200	Biochemistry Experiment	0:9:3(2)	Fall	
	BS202	21.202	Cell Biology	3:0:3(4)	Fall	
	BS205	21.205	Biochemistry I	3:0:3(3)	Spring	
	BS208	21.208	Biochemistry II	3:0:3(3)	Fall	
	BS209	21.209	Molecular Biology	3:0:3(4)	Spring	
	BS319	21.319	Cell Biology Experiment	0:9:3	Spring	
Major Elective	BS223	21.223	Introductory Biotechnology	3:0:3	Spring	
	BS232	21.232	Microbiology	3:0:3(1)	Fall	
	BS307	21.307	Physical Chemistry for Life Science	3:0:3	Spring	
	BS310	21.310	Genome Molecular Biology	3:0:3	Fall	
	BS311	21.311	Animal Diversity	3:0:3	Spring	
	BS312	21.312	Evolution	3:0:3	Fall	
	BS315	21.315	Genetics	3:0:3(3)	Spring	
	BS316	21.316	Introduction to Epigenetics	3:0:3	Spring, Fall	
	BS318	21.318	Developmental Biology	3:0:3	Fall	
	BS322	21.322	Biological Engineering	3:0:3(3)	Fall	
	BS325	21.325	Microbial and Cell Biotechnology	3:0:3(2)	Spring	
	BS326	21.326	Biotechnology Experiment	0:9:3(2)	Fall	
	BS332	21.332	Microbial Chemistry	3:0:3(2)	Fall	
	BS342	21.342	Enzymology	3:0:3(1)	Fall	
	BS346	21.346	Animal Behavior	3:0:3	Fall	
	BS355	21.355	Pharmacology	3:0:3(1)	Spring	
	BS357	21.357	Introduction to Neuroscience	3:0:3	Fall	
	BS358	21.358	Plant Biology	3:0:3	Spring	
	BS365	21.365	Environmental Microbiology	3:0:3(1)	Fall	
	BS367	21.367	Biomolecular Chemistry	3:0:3	Spring	
	BS371	21.371	Animal Cell Culture and Engineering	3:0:3	Spring	
	BS413	21.413	Experiments for Genetics and Developmental Biology	0:9:3	Spring	
	BS414	21.414	Ecology	3:0:3	Spring or Fall	☉
BS415	21.415	Genomics	3:0:3	Spring, Fall	☉	
BS416	21.416	Molecular Genetic Techniques	3:0:3	Spring or Fall	☉	
BS417	21.417	Eco-Evo-Devo	3:0:3	Spring, Fall	☉	

☉: Course mutually recognized by undergraduate and graduate programs

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Major Elective	BS431	21.431	Virology	3:0:3(3)	Spring	◎
	BS433	21.433	Molecular Biology of Gene Regulation	3:0:3(3)	Spring	◎
	BS435	21.435	Bio-Imaging	3:0:3	Spring	◎
	BS442	21.442	Stem Cell Biology	3:0:3	Fall	◎
	BS450	21.450	Neuroscience II	3:0:3	Fall	◎
	BS452	21.452	Immunology	3:0:3	Spring	◎
	BS453	21.453	Physiology	3:0:3	Spring	◎
	BS454	21.454	Introduction to Structural Biology	3:0:3(1)	Fall	◎
	BS456	21.456	Behavioral Physiology	2:3:3	Spring, Fall	◎
	BS458	21.458	Synthetic Biology	3:0:3	Fall	◎
	BS462	21.462	Environmental Biotechnology	3:0:3(1)	Fall	◎
	BS463	21.463	Genetic Engineering	3:0:3(3)	Spring	◎
	BS465	21.465	NanoBioTechnology	3:0:3	Fall	◎
	BS467	21.467	Biomaterials	3:0:3	Spring	◎
	BS469	21.469	Scientific communication	3:0:3	Spring	◎
	BS481	21.481	Topics in Life Science I	1:0:1		◎
	BS482	21.482	Topics in Life Science II	2:0:2		◎
	BS483	21.483	Topics in Life Science III	3:0:3		◎
BS484	21.484	Topics in Life Science IV	3:0:3		◎	
BS485	21.485	Topics in Life Science V	3:0:3		◎	
BS486	21.486	Topics in Life Science VI	3:0:3		◎	
Research	BS490	21.490	B.S. Thesis Research	0:6:3		Required
	BS495	21.495	Specified Research	0:6:1		Elective
	BS496	21.496	Seminar	1:0:1		Elective

◎: Course mutually recognized by undergraduate and graduate programs

Curriculum List (Graduate program)

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit (Assignment)	Semester	Note
Elective	BS501	21.501	Bioassay Standards	3:0:3	Spring	◎
	BS507	21.507	General Clinical Medicine	3:0:3	Fall	◎
	BS510	21.510	Neural Control of Metabolism & Behavior	3:0:3	Spring or Fall	◎
	BS512	21.512	Biostatistics	3:0:3(4)	Fall	◎
	BS513	21.513	Synthetic Immunology	3:0:3	Spring or Fall	◎
	BS515	21.515	Behavioral Genetics	3:0:3	Spring	◎
	BS516	21.516	Advanced Genetics	3:0:3	Spring	◎
	BS517	21.517	Disorders in the Nervous System	3:0:3	Spring or Fall	◎
	BS518	21.518	Chemical Genomics&Medicinal Systems Biology	3:0:3(1)	Fall	◎
	BS521	21.521	Cancer Biology	3:0:3	Spring	◎
	BS524	21.524	Advanced Molecular Biology	3:0:3(3)	Fall	◎
	BS525	21.525	Gene Expression	3:0:3(3)	Spring	◎
	BS526	21.526	Molecular Virology	3:0:3(3)	Fall	◎
	BS528	21.528	Advanced Epigenetics	3:0:3	Spring, Fall	◎
	BS531	21.531	Advanced Microbiology	3:0:3(2)	Spring	◎
	BS532	21.532	Applied and Environmental Microbiology	3:0:3(1)	Spring	◎
	BS536	21.536	Environmental Toxicology	3:0:3(2)	Fall	◎
	BS538	21.538	Microbial Genomics	3:0:3(4)	Fall	◎
	BS541	21.541	Advanced Cell Biology	3:0:3	Spring	◎
	BS542	21.542	Immunotherapy	3:0:3	Fall	◎
	BS543	21.543	Advanced Neurobiology	3:0:3(1)	Fall	◎
	BS547	21.547	Neural Development	3:0:3	Spring	◎
	BS549	21.549	Biology of Metabolism	3:0:3	Fall	◎
	BS552	21.552	Advanced Fermentation Technology	3:0:3(2)	Fall	◎
	BS553	21.553	Omics Biology	3:0:3	Spring	◎
	BS554	21.554	Advanced Biological Engineering	3:0:3(3)	Fall	◎
	BS562	21.562	Protein Design	3:0:3	Fall	◎
	BS564	21.564	Bioanalytical Technology	3:0:3	Fall	◎
	BS566	21.566	Bioconjugate Chemistry	3:0:3	Fall	◎
	BS571	21.571	Advanced Animal Cell Engineering	3:0:3	Spring	◎
	BS582	21.582	Food Engineering I	3:0:3(2)	Fall	◎
	BS584	21.584	Novel Drug Delivery Systems	3:0:3(3)	Fall	◎
	BS585	21.585	Advanced Developmental Biology	3:0:3(6)	Spring	◎
BS586	21.586	Plant Developmental Biology	3:0:3	Fall	◎	
BS588	21.588	Cell Signaling	3:0:3(6)	Fall	◎	

◎: Course mutually recognized by undergraduate and graduate programs

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit (Assignment)	Semester	Note
Elective	BS589	21.589	Cancer Genetics	3:0:3	Spring, Fall	◎
	BS611	21.611	Advanced Molecular Cell Biology I	3:0:3(3)	Spring	
	BS612	21.612	Advanced Molecular Cell Biology II	3:0:3(3)	Fall	
	BS613	21.613	Cellular and Molecular Immunology	3:0:3	Fall	
	BS614	21.614	Advanced Systems Neuroscience	3:0:3	Spring or Fall	
	BS620	21.620	Mechanism of biological molecules	3:0:3	Fall	
	BS622	21.622	Enzyme Chemistry	3:0:3	Fall	
	BS624	21.624	Protein Chemistry and Engineering	3:0:3	Fall	
	BS626	21.626	Nucleic Acid Biochemistry	3:0:3(3)	Fall	
	BS628	21.628	Biological Membranes	3:0:3	Fall	
	BS631	21.631	Microbial Genetics	3:0:3(2)	Spring	
	BS632	21.632	Advanced cancer biology	3:0:3	Spring	
	BS633	21.633	Microbial Physiology	3:0:3(2)	Spring	
	BS643	21.643	Neurobiology of memory	3:0:3	Spring	
	BS662	21.662	Bioseparation Technology	3:0:3	Fall	
	BS664	21.664	Numerical Methods for Biochemical Engineering	3:0:3	Fall	
	BS711	21.711	Bioinformatics	3:0:3(3)	Fall	
	BS713	21.713	Human Genomics	3:0:3(2)	Spring	
	BS720	21.720	Selected Topics in Biochemistry	3:0:3	Spring, Fall	
	BS722	21.722	Biochemistry of Carcinogenesis	3:0:3(3)	Fall	
	BS723	21.723	Cell Signaling Networks	3:0:3	Spring	
	BS730	21.730	Selected Topics in Microbiology	3:0:3	Spring, Fall	
	BS740	21.740	Selected Topics in Cell Biology	3:0:3	Spring, Fall	
	BS742	21.742	Molecular Cell Biology	3:0:3(2)	Fall	
	BS750	21.750	Selected Topics in Biotechnology	3:0:3	Spring, Fall	
	BS760	21.760	Selected Topics in Environmental Biotechnology	3:0:3	Spring	
	BS781	21.781	Special Topics in Food Science & Technology	3:0:3	Spring	
BS791	21.791	Scientific Writing in English	3:0:3(4)	Spring		
BS801	21.801	Advanced Topics in Life Science I	1:0:1			
BS802	21.802	Advanced Topics in Life Science II	2:0:2			
BS803	21.803	Advanced Topics in Life Science III	3:0:3			
Research	BS960	21.960	M.S. Thesis Research		Spring, Fall	
	BS965	21.965	Independent Study in M.S.		Spring, Fall	
	BS966	21.966	M.S. Seminar	1:0:1	Spring, Fall	
	BS980	21.980	Ph.D. Thesis Research		Spring, Fall	
	BS986	21.986	Ph.D. Seminar	1:0:1	Spring, Fall	
	BS990	21.990	Graduate Student Seminar	1:0:1	Spring, Fall	

◎: Course mutually recognized by undergraduate and graduate programs

Alternative Course List

Alternative courses in the department					
Category	Courses currently offered		Courses not currently offered		
	Course no.	Course title	Course no	Course title	Remark
Undergraduate	BS319	Cell Biology Experiment	BS319	Cell Biology and Genetics Experiment	course title changed

Alternative courses offered by other departments					
Category	Courses offered by the department		Courses offered by other departments		
	Course no.	Course no.	Course no.	Course no.	Remark
Undergraduate	BS202	Cell Biology	BiS202	Cell Biology	Bidirectional substitution
Undergraduate	BS208	BiochemistryII	BiS208	BiochemistryII	Bidirectional substitution