

Courses listed in *ITALIC* type cannot be applied to Biology elective reqmts. This schedule is subject to frequent changes. See the on-line class schedule for the most accurate information.

BIOL	TITLE	CR	NOTES	LAB	PRE-REQUISITES and COMMENTS (C- or better needed unless otherwise indicated)	SEM
1010	<i>Biology in the 21st Century</i>	3	DV, SF		Not counted toward BIOL Degree.	F/S
1030	<i>Human Biology</i>	3	SF		Not counted toward BIOL Degree.	F
1610	Fundamental Principles of Biology I	4	SF		C or better in (MATH 1010 OR MATH 1030 OR MATH 1050 OR MATH 1060 OR MATH 1080 OR MATH 1180 OR MATH 1210 OR MATH 1220 OR MATH 1260 OR MATH 1310 OR MATH 1320 OR MATH 1321) OR ACT 23+ OR SAT 570+ OR AP Calc BC 3+ OR AP Calc AB 3+ OR CLM 60+ OR AAF 245+.	ALL
1615	Fundamental Principles of Biology Lab I	1		[L1]	Co-req BIOL 1610 (or Pre-req BIOL 1210)	F/S
1620	Fundamental Principles of Biology II	4			C or better in (MATH 1010 OR MATH 1030 OR MATH 1050 OR MATH 1060 OR MATH 1080 OR MATH 1180 OR MATH 1210 OR MATH 1220 OR MATH 1260 OR MATH 1310 OR MATH 1320 OR MATH 1321) OR ACT 23+ OR SAT 570+ OR AP Calc BC 3+ OR AP Calc AB 3+ OR CLM 60+ OR AAF 245+.	F/S
1625	Fundamental Principles of Biology Lab II	1		[L1]	Co-req BIOL 1620 (or Pre-req BIOL 2010)	F/S
2020	Principles of Cell Biology	3			BIOL 1210 -or- 1610 -or- AP4+ -or- BME 1020 -and- CHEM 1210 -or- 1211 -or- AP4+	F/S
2021	Principles of Cell Science	4	Honors		BIOL 1210 -or- 1610 -or- AP4+ -or- BME 1020 -and- CHEM 1210 -or- 1211 -or- AP4+ -or- Instructor Consent	F
2030	Principles of Genetics	3			BIOL 2020 -or- 2021	F/S
2032	Genetics in Research	1			*Co-req BIOL 2030 in same semester	
2210	Human Genetics	3	SF		BIOL 1210 -or- 1610 -or- AP4+	S
2325	Human Anatomy	4		[L1]		ALL
2355	Field Botany	2	Half Sem	[L1]		Su
2420	Human Physiology	4	AS		BIOL 1210 -or- 1610 -or- AP4+ -and- CHEM 1110 -or- 1130 -or- 1210 -or- 1211 -or- AP4+	ALL
2425	Human Physiology Lab	1		[L1]	*Co-Req: BIOL 2420	F/S
2870	Faculty Research Seminar	1				F
3125	Mol Tools for Evol & Pop Biology	3	Half Sem	[L2]	BIOL 1620 -or- 2010 -and- 2030	S (even)
3205	General Microbiology Lab	1		[L1]	*Co-Req: BIOL 3210 -or- 3370 -or- PATH 3100	F/S
3210	General & Pathogenic Microbiology	3	opt. CEL		BIOL 2020 -or- 2021 -and- CHEM 1110 -or- 1130 -or- 1210 -or- 1211 -or- AP4+	F/S
3230	Developmental Biology	3			BIOL 2030	F
3240	Intro to Cellular Neurobiology	3			BIOL 2020 -or- 2021	F
3270	Microbial Ecosystems	3			BIOL 1620 -or- 2010	S
3310	Comp Vertebrate Morphology	3	F&F		BIOL 1620 -or- 2010	S
3315	Comp Vertebrate Morphology Lab	1		[L1]	BIOL 1620 -or- 2010	
3320	Comparative Physiology	3	F&F		BIOL 1620 -or- 2010	F 22
3325	Comparative Physiology Lab	3		[L2]	BIOL 1210 -or- 1610 -or- AP4+	S
3330	Behavioral Neurobiology	3	F&F		BIOL 1620 -or- 2010 -or- 2420	S
3340	Intro to Plant Biology	3	F&F		BIOL 1210 -or- 1610 -or- AP4+	
3360	Vertebrate Embryology	3			BIOL 2325	F (even)
3370	Microbial Biology	3	F&F		BIOL 2020 -or- 2021	S
3380	Evol & Physiol Basis of Health	3	F&F		BIOL 2020 -or- 2021 -or- 2420	F
3410	Ecology & Evolution	3			BIOL 1620 -or- 2010 -and- MATH 1170 -or- 1310 -or- 1210 -or- 1250 -or- AP Calc AB4+ -or- BC3+	F/S
3430	Behavioral Ecology	3			BIOL 1620 -or- 2010	S (odd)
3450	Rainforest Ecology & Conservation (SL)	3	SF, IR		BIOL 1620 -or- BIOL 2010	
3460	Global Environmental Issues (SL)	3	SF, IR, CEL			F
3470	Conservation Biology	3	AS, CEL			S
3485	Conservation Biology Field Lab	1		[L1]	BIOL 1620 -or- 2010 -and- *Co-Req: BIOL 3470. Recommend: BIOL 3410	S
3510	Biological Chemistry I	3	CEL		CHEM 2310 -or- 2311	ALL (Su in Chem)
3515	Biological Chemistry Lab	3		[L1]	*Co-Req: BIOL 3510 -or- CHEM 3510	S
3520	Biological Chemistry II	3			BIOL 3510 -or- CHEM 3510	S
3525	Molecular Biology of DNA Lab	3		[L2]	Recommend BIOL 3510	F
3550	Physical Principles in Biology	3	QI		BIOL 2020 -or- 2021 -and- CHEM 1220 -or- 1221 -and- MATH 1180 -or- 1220	F
3551	Physical Principles in Biology	3	Honors, QI		BIOL 2020 -or- 2021 -and- CHEM 1220 -or- 1221 -and- MATH 1180 -or- 1220 -and- Member of Honors College	F
3665	Form, Function & Adaptation In Animals	3	F&F	[L2]		S
3960	Special Topics in Biology	1-5			Instructor Consent. Topics vary	check schedule
4312	Human Dissection	1			BIOL 5313 -or- 5315	F/S
4313	<i>Teaching Anatomy</i>	1-2			<i>Instructor Consent.</i>	F/S (not F22)
4314	Anatomy Colloquium	1			Instructor Consent.	F (not F22)
4316	Anatomy & Physiology Colloquium	1			BIOL 5313	S
4900	<i>Teaching Experience</i>	2			<i>Instructor Consent. (Does not fulfill major reqmts, see advisor)</i>	ALL
4950	Directed Reading	1-3			Instructor Consent	ALL
4955	Individual Research	1-3		[L1-L2]	Instructor Consent	ALL
4965	Independent Professional Internship	1-3			Instructor Consent	ALL
4995	Biology Honors Research	1-4	Honors	[L1-L2]	Instructor Consent -and- Member of Honors College	ALL
4999	Honors Thesis/Project	3	Honors		Instructor Consent -and- Member of Honors College	ALL

BIOL	TITLE	CR	NOTES	LAB	PRE-REQUISITES/COMMENTS	SEM
5011	Mathematical Biology I (MATH 5110)	3			MATH 2250 -or- 2280	F
5012	Mathematical Biology II (MATH 5120)	3	QI		BIOL 5011 -or- MATH 5110	S
5120	Gene Expression	3			BIOL 2020 -or- 2021	S
5140	Genome Biology	3			BIOL 2030	S 23
5210	Cell Structure & Function	3			BIOL 2020 -or- 2021	S
5221	Human Evolutionary Genetics	4	QI	[L1]	MATH 1170 -or- 1210 -or- 1250 -or- 1310	S 22
5255	Prokaryotic Genetics	3		[L2]	Recommend BIOL 2020 -or- 2021 -and- BIOL 2030	
5270	Microbial Ecosystems	3			BIOL 1620 -or- 2010	S
5275	Microbial Diversity, Genomics & Evolution	4		[L2]	BIOL 1620 -or- 2010 -and- 2030	F
5315	Advanced Human Anatomy	3		[L1]	BIOL 2325	S
5350	Ornithology	3			BIOL 1620 -or- 2010	S
5355	Ornithology Field Lab	1		[L1]	*Co-req BIOL 5350	S(even)
5370	Mammalogy	3			BIOL 1620 -or- 2010	F
5425	Mycology	4		[L1]	BIOL 1620 -or- 2010	F
5435	Plant Systematics	4		[L1]	Recommend BIOL 2020 -or- 2021 -and- 3410	F (even)
5440	Urban Ecology	3				S 22
5455	Desert Ecology Field Course	3		[L1]	Instructor Consent.	F + Fall Break
5460	Plant Ecology in a Changing World	3	hybrid		BIOL 1620 -or- 2010 -or- Instructor Consent	F
5471	Quantitative Models in Evolutionary Ecology	3	QI		MATH 1050 -and- *Co-Req: BIOL 3410	S
5480	Entomology	3	CEL		BIOL 1620 -or- 2010	F
5485	Entomology Lab	1		[L1]	*Co-req BIOL 5480	F
5490	Ecosystem Ecology	3			CHEM 1220 -or- 1221	S(even)
5495	Biophysical Ecology	4	QI	[L1]	MATH 1180 -or- 1220 -or- 1260 -or- 1320 (and Recommend PHYS 2010)	S(odd)
5510	Genes, Development, and Evolution	3			BIOL 1210 -or- 1610 -or- AP4+	F
5570	Ecol & Evolution Parasites & Pathogens	3	F&F		BIOL 1210 -or- 1610 -and- BIOL 1620 -or- 2010 -and- Co-Req BIOL 3410	F
5575	Ecol & Evolution Parasites & Pathogens Lab	1		[L1]	*Co-req BIOL 5570	F
5720	Biology of Biotechnology	1	Half Sem			F
5800	Adv Topics in Biochem & Cell Biology	2	Half Sem		BIOL 2020 -or- 2021 -and- BIOL 3510 or CHEM 3510	Su
5810	Nanoscience (CHEM 5810)	3			CHEM 1220 -or- 1221 -and- PHYS 2220	S
5910	Mathematical Models in Biology	3	QI		MATH 1180 -or- 1220 -or- 1260 -or- 1320	varies
5960	Advanced Special Topics in Biology	1-5			Instructor Consent. Topics vary.	
CHEM						
5750	Advanced Chemical Biology Lab	2	Half Sem	[L1]		S

**Info about electives:**

5xxx: The following courses CANNOT be counted as BIOL 5XXX electives: BIOL 5312, 5313, 5314, 5316, 5900, some 5960 courses

2xxx: A maximum of 6 CR of 2000-level BIOL courses may count towards Biology electives

Labs: FOUR BIOLOGY LABS totaling 5 LAB UNITS are required.

AT LEAST 21 CR BIOLOGY must be from the BIOLOGY DEPARTMENT (including 2 labs with 3 LAB UNITS). Students may transfer in up to two transfer Biolog

**Info about Science and/or Biology Credits (72 CR SCIENCE and 36 CR BIOLOGY required for BIOLOGY BA/BS):**

**Biology:** All Biology Courses numbered  $\geq$  BIOL 1210, EXCEPT BIOL 1970, 3080, 3670, 4080, 5313, 5401, 5900

**Chemistry:** All Chemistry Courses numbered  $\geq$  1210 EXCEPT 2300 and 2308.

**Math:** MATH 1070, all Math Courses numbered  $\geq$  1170 EXCEPT 1900, 4090, 4095, and 4190.

**Physics:** PHYS 1050, 1060, 1095; All Physics Courses numbered  $\geq$  2010 EXCEPT 3160.