

**Alternative for the Second Language Requirement for the B.S. in Biological Sciences
Effective SP2022**

Students may select 12 hours of courses numbered 2000 or above from **one** of the following two tracks as an alternative for the Second Language requirement.

You may not pick and choose among the tracks – your alternative for Second Language must consist of courses from the same track.

Courses used from this list to meet the Second Language Requirement may NOT be used to satisfy major or Arts and Science Foundation requirements.

All of the courses on this list have been offered on a more-or-less regular basis for the past 5 years; however, the Division of Biological Sciences makes no representation that they will continue to do so. Some courses may be restricted to majors during the early registration period. Students should confer with the appropriate departments when questions arise about the offering of particular courses on this list or the availability of spaces for non-majors.

Environmental and Conservation Biology

<input type="checkbox"/> AN SCI 3213 Genetics of Agric Plants and Animals (3)	<input type="checkbox"/> F & W 2900 Principle of Wildlife Management (4)	<input type="checkbox"/> GEOG 2660 Environmental Geography (3)
<input type="checkbox"/> AN SCI 4323 Applied Livestock Genetics (2)	<input type="checkbox"/> F & W 3600 Introduction to Conservation Biology (3)	<input type="checkbox"/> GEOG 3040 Intro to Geographic Info System GIS (3)
<input type="checkbox"/> AN SCI 4324 Genomics of Plants and Animals (2)	<input type="checkbox"/> F & W 4200 Urban Wildlife Conservation (3)	<input type="checkbox"/> GEOG 4620 Biogeography (3)
<input type="checkbox"/> ANTHRO 4320 Ecological and Environmental Anthro (3)	<input type="checkbox"/> F & W 4300 Fisheries Management (3)	<input type="checkbox"/> GEOG 4810 Landscape Ecology & GIS Analysis (3)
<input type="checkbox"/> ENV SCI 2600 Sustainability Foundations (3)	<input type="checkbox"/> F & W 4600 Ecosystems Management (3)	<input type="checkbox"/> HIST 4440 History of the American Environment (3)
<input type="checkbox"/> ENV SCI 3400 Water Quality & Natural Resource Mgmt (3)	<input type="checkbox"/> F & W 4650 Natural Resource Planning & Management (4)	<input type="checkbox"/> NAT_R 2325 Intro to Geographic Info Systems (3)
<input type="checkbox"/> ENV SCI 4100 Lake Ecology (3)	<input type="checkbox"/> FOREST 2151 Dendrology (4)	<input type="checkbox"/> PHIL 2900 Environmental Ethics (3)
<input type="checkbox"/> ENV SCI 4200 Stream Ecology and Hydrology (3)	<input type="checkbox"/> FOREST 4320 Forest Ecology (5)	<input type="checkbox"/> PLNT SC 4500 Biology & Pathogenesis of Plant Microbes (4)
<input type="checkbox"/> ENV SCI 4320 Hydrologic and Water Quality Modeling (3)	<input type="checkbox"/> FOREST 4390 Watershed Management and Water Quality (3)	<input type="checkbox"/> SOIL 2100 Introduction to Soils (3)
<input type="checkbox"/> ENV SCI 4400 Environmental Law, Policy, and Justice (3)	<input type="checkbox"/> GEOG 2610 Climate, Landforms and Vegetation (3)	<input type="checkbox"/> SOIL 2106 Soil Science Laboratory (2)
		<input type="checkbox"/> SOIL 3290 Soils and the Environment (3)

Medicine, Health and Society

<input type="checkbox"/> ANTHRO 2050 Intro to Biological Anthropology with Lab (5)	<input type="checkbox"/> HIST 3550 Science & Med in Ancient & Medieval Eur (3)	<input type="checkbox"/> P_HLTH 2200 Intro to Public Health (3)
<input type="checkbox"/> ANTHRO 2500 Primate Anatomy and Evolution (3)	<input type="checkbox"/> HLTH SC 2400 Contemporary Health Issues (3)	<input type="checkbox"/> P_HLTH 3310 Social and Behavioral Health Theory (3)
<input type="checkbox"/> ANTHRO 2580 Evolution of Human Sexuality (3)	<input type="checkbox"/> HLTH SC 3800 Holistic Health Systems for Health Prof (3)	<input type="checkbox"/> P_HLTH 4350 Principles of Environmental Health (3)
<input type="checkbox"/> ANTHRO 3560 Plagues and Peoples (3)	<input type="checkbox"/> HLTH SC 4300 Health Care in the US (3)	<input type="checkbox"/> P_HLTH 4485 Ethics in Public Health (3)
<input type="checkbox"/> ANTHRO 4360 Medical Anthropology (3)	<input type="checkbox"/> HLTH SC 4430 Health Care Across the Lifespan (3)	<input type="checkbox"/> PSYCH 3830 Health Psychology (3)
<input type="checkbox"/> ANTHRO 4540 Human Biological Variation (3)	<input type="checkbox"/> MICRO 4304 Immunology for Health Professions (3)	<input type="checkbox"/> PTH AS 2201 Human Anatomy Lecture (3)
<input type="checkbox"/> ANTHRO 4580 Evolutionary Medicine (3)	<input type="checkbox"/> MPP 4204 Medical Pharmacology (4)	<input type="checkbox"/> PTH AS 2203 Human Anatomy Laboratory (2)
<input type="checkbox"/> ANTHRO 4890 Human Skeletal Identification & Analysis (5)	<input type="checkbox"/> NEP 2222 Landscape of Obesity (3)	<input type="checkbox"/> PTH AS 4220W Forensic Pathology & Death Investig (2)
<input type="checkbox"/> BIOCHEM 4272 Biochemistry II (3)	<input type="checkbox"/> NEP 2340 Human Nutrition I (3)	<input type="checkbox"/> SOC 3440 Sociology of Health (3)
<input type="checkbox"/> BIOMED 2110 Biomedical Terminology (3)	<input type="checkbox"/> NEP 2380 Diet Therapy for Health Prof (3)	<input type="checkbox"/> V_PBIO 3345(W) Fundamentals of Parasitology (3)
<input type="checkbox"/> CDS 2190 Medical Terminology (3)	<input type="checkbox"/> NEP 2450 Nutrition Throughout the Life Span (3)	<input type="checkbox"/> V_PBIO 3551 Introduction to Immunology I (3)
<input type="checkbox"/> CHEM 2140 Organic Laboratory II (2)	<input type="checkbox"/> NEP 2460 Eating Disorders (3)	<input type="checkbox"/> V_PBIO 3554 Introduction to Virology (3)
<input type="checkbox"/> CHEM 2400 Fundamentals of Inorganic Chem with Lab (3)	<input type="checkbox"/> NEP 3450 Activity Throughout the Lifespan (3)	<input type="checkbox"/> V_PBIO 3600 Bacterial Genetics and Genomics (3)
<input type="checkbox"/> CHEM 3200 Quantitative Methods of Analysis with Lab (4)	<input type="checkbox"/> NEP 4400 Pathophys of Diseases of Metab (3)	<input type="checkbox"/> V_PBIO 3658 Public Health Microbiology (3)
<input type="checkbox"/> F S 2172 Elements of Food Microbiology (3)	<input type="checkbox"/> PHIL 2440 Medical Ethics (3)	<input type="checkbox"/> WGST 2050 Gender and Public Health (3)
<input type="checkbox"/> F S 4370 Food Microbiology (3)	<input type="checkbox"/> PHIL 4400 Philosophy of Science (3)	<input type="checkbox"/> WGST 4600 Women and Health (3)

Course #	Course Name	Prerequisites		
AN SCI 3213	Genetics of Agric Plants and Animals (3)	BIO_SC 1010, BIO_SC 1020 or BIO_SC 1500, MATH 1100.	Environmental and Conservation Biology	
AN SCI 4323	Applied Livestock Genetics (2)	BIO_SC 1010, BIO_SC 1020 or BIO_SC 1500 and MATH 1100.		
AN SCI 4324	Genomics of Plants and Animals (2)	BIO_SC 1010, BIO_SC 1020 or BIO_SC 1500 and MATH 1100.		
ANTHRO 4320	Ecological and Environmental Anthropology (3)	Junior standing		
ENV SCI 2600	Sustainability Foundations: Intro (3)	None		
ENV SCI 3400	Water Quality & Nat Resource Management (3)	Chem 1320 recommended		
ENV SCI 4100	Lake Ecology (3)	BIO_SC 3650 or Senior standing recommended		
ENV SCI 4200	Stream Ecology and Hydrology (3)	Math 1100, Junior standing		
ENV SCI 4320	Hydrologic and Water Quality Modeling (3)	ENV_SC 1100 or SOIL 2100		
ENV SCI 4400	Environmental Law, Policy, and Justice (3)	Junior standing		
F&W 2900	Principles of Wildlife Management (4)	NAT_R 1070 and 1 Biology course recommended		
F&W 3600	Introduction to Conservation Biology (3)	BIO_SC 3650		
F&W 4200	Urban Wildlife Conservation (3)	BIO_SC 3650 or instructor's consent		
F&W 4300	Fisheries Management (3)	BIO_SC 3650 and STAT 2500		
F&W 4600	Ecosystem Management (4)	BIO_SC 3650		
F&W 4650	Natural Resource Planning and Management (4)	BIO_SC 3650		
FOREST 2151	Dendrology (4)	BIO_SC 1200 or PLNT_S 2120 and PLNT_S 3130 or instructor's consent		
FOREST 4320	Forest Ecology (5)	FOREST 2151, BIO_SC 3210 or instructor's consent		
FOREST 4390	Watershed Management and Water Quality (3)	MATH 1400 or instructor's consent		
GEOG 2610	Climate, Landforms and Vegetation (3)	None		
GEOG 2660	Environmental Geography (3)	None		
GEOG 3040	Intro to Geographic Info System GIS (3)	Sophomore standing or instructor's consent		
GEOG 4620	Biogeography (3)	GEOG 2610 and junior standing, or instructor's consent		
GEOG 4810	Landscape Ecology and GIS Analysis (3)	GEOG 3040		
HIST 4440	History of the American Environment (3)	None		
NAT_R 2325	Intro to Geographic Information Systems (3)	NAT_R 1070		
PHIL 2900	Environmental Ethics (3)	Recommended: PHIL 1100.		
PLNT SC 4500	Biology & Pathogenesis of Plant Microbes (4)	Bio 1500; Jr Standing		
SOIL 2100	Introduction to Soils (3)	3 hrs of Chemistry		
SOIL 2106	Soil Science Laboratory (2)	SOIL 2100 corequisite		
SOIL 3290	Soils and Environment (3)	SOIL 2100, 3 hours of chemistry, ENGLISH 1000 or instructor's consent		
ANTHRO 2050	Intro to Biological Anthropology with Lab (5)	Math 1100, sophomore standing		Medicine, Health, and Society
ANTHRO 2500	Primate Anatomy and Evolution (3)	Sophomore standing		
ANTHRO 2580	Evolution of Human Sexuality (3)	Sophomore standing		
ANTHRO 3560	Plagues and Peoples (3)	Sophomore standing or instructor's consent		
ANTHO 4360	Medical Anthropology (3)	Junior or senior standing or instructor's consent		
ANTHRO 4540	Human Biological Variation (3)	ANTHRO 2050 or ANTHRO 2051 or BIO_SC 1010 or MATH 1100 or MATH 1120		
ANTHRO 4580	Evolutionary Medicine (3)	Lower level course in Biology or Biological Anthropology, junior or senior standing or instructor's consent		
ANTHRO 4890	Human Skeletal Identification and Anal (5)	ANTHRO 2050 or ANTHRO 2052 or instructor's consent		
BIOCHEM 4272	Biochemistry II (3)	BIOCHM 4270		
BIOMED 2110	Biomedical Terminology (3)	Consent required		
CDS 2190	Medical Terminology (3)	Sophomore standing required		
CHEM 2140	Organic Laboratory II (2)	Grade of C or better in CHEM 2110 and CHEM 2130 or equivalent		
CHEM 2400	Fundamentals of Inorganic Chem with Lab (3)	Grade of C or better in CHEM 1330		
CHEM 3200	Quantitative Methods of Analysis with Lab (4)	CHEM 1330 or CHEM 1500H		
F S 2172	Elements of Food Microbiology (3)	Sophomore standing required		
F S 4370	Food Microbiology (3)	F S 2172 and one Biochemistry course or concurrent enrollment		
HIST 3550	Science & Med in Ancient & Medieval Europe (3)	Sophomore standing		
HLTH SC 2400	Contemporary Health Issues (3)	Restricted to Health Sciences Majors during pre-registration		
HLTH SC 3800	Holistic Health Systems for Health Professions (3)	Junior or Senior standing required and restricted to Health Sciences Majors during pre-registration		
HLTH SC 4300	Health Care in the US (3)	Restricted to Health Sciences Majors during pre-registration		
HLTH SC 4430	Health Care Across the Lifespan (3)	HLTH SC 4300		
MICROB 4304	Immunology (3)	MICROB 3200 or BIOCHM 4270		
MPP 4204	Medical Pharmacology (5)	BIO 3700 or MPP3202		
NEP 2222	Landscape of Obesity (3)	Sophomore standing required		
NEP 2340	Human Nutrition I (3)	Organic Chemistry, MPP 3202 or instructor's consent		
NEP 2380	Diet Therapy for Health Prof (3)	Sophomore standing required		
NEP 2450	Nutrition Throughout the Life Span (3)	NEP 1034 or NEP2340 or NEP 2380 or equivalent		
NEP 2460	Eating Disorders (2)	NEP 1034 or higher level nutrition course		
NEP 3450	Activity Throughout the Lifespan (3)	NEP 1340		
NEP 4400	Pathophysiology of Diseases of Metab Health (3)	MPP 3202 or BIO_SC 3700 and BIOCHM 3630 or BIOCHM 4270		
PHIL 2440	Medical Ethics (3)	None		
PHIL 4400	Philosophy of Science (3)	Sophomore standing and two courses in Philosophy; or instructor's consent		
P_HLTH 2200	Introduction to Public Health (3)	None		
P_HLTH 3310	Social & Behavioral Health Theory & Practice (3)	Restricted to Public Health Majors during pre-registration		
P_HLTH 4350	Principles of Environmental Health (3)	Restricted to Public Health Majors during pre-registration		
P_HLTH 4485	Ethics in Public Health (3)	Restricted to Public Health Majors during pre-registration		
PSYCH 3830	Health Psychology (3)	PSYCH 1000		
PTH AS 2201	Human Anatomy Lecture (3)	Minimum cumulative MU GPA of 2.5 required		
PTH AS 2203	Human Anatomy Laboratory (2)	PTH_AS 2201, Minimum cumulative MU GPA of 2.5		
PTH AS 4220W	Forensic Pathology and Death Investigation (2)	None		
SOC 3440	Sociology of Health (3)	None		
V_PBio 3345(W)	Fundamentals of Parasitology (3)	BIO_SC 1030 or BIO_SC 1500 or instructor consent		
V_PBio 3551	Introduction to Immunology I (3)	BIO_SC 2200 and BIO_SC 2300		
V_PBio 3554	Introduction to Virology (3)	BIO_SC 3750 or V_PBio 2001, BIO_SC 2300		
V_PBio 3600	Bacterial Genetics and Genomics (3)	V_PBio 2001 or BIO_SC 3750 or equivalent		
V_PBio 3658	Public Health Microbiology (3)	Bio 1500 or equivalent		
WGST 2050	Gender and Public Health (3)	None		
WGST 4600	Studies in Women and Health (3)	None		