3 Credits/Units

3 Credits/Units

BIOLOGY (BIOL/BIOL&)

Biol

Environ	
BIOL 101	

Conf/Lab

5 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Overview of basic concepts and issues related to the interaction between humans and their environment. Topics include population growth, loss of biodiversity, global climate change, ozone depletion, energy consumption and various types of pollution. This course is intended for non-majors and fulfills the laboratory science distribution requirement. It is also required for WSU-Vancouver Environmental Science/Regional Planning majors. [GE, NS, NS-LAB, SE]

The	Process	of	Discovery
BIOL 102			5 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Introduction to the processes of discovery used in the natural and social sciences. Includes authentic research on factors that contribute to college student success, studied in social, psychological, and physiological contexts. Research topics include hypothesis development, experimental design, literature searches, data analysis, research ethics and human subjects research considerations. Course fulfills COLL 101: College Essentials outcomes including goal setting, personal management skills, developing an academic plan, developing cultural competence and communication skills, financial literacy, and an introduction to student resources at the college.[GE, NS, NS-LAB, SE] [PNP]

Small	World	Antibiotics	Research	1
BIOL 105				5 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Investigative course involving authentic research to discover potentially new antibiotics. Overview of basic concepts and issues in biology including the cellular basis of life, metabolism, principles of inheritance, evolution and ecology as they relate to soil microbiology and human disease processes and treatment. Strong emphasis on scientific inquiry including critical thinking, laboratory research methodology, and communication abilities. This course is intended for non-biology majors and fulfills the laboratory science requirements or as a recommended course for other biology courses. English writing skills are highly recommended. [GE, NS, NS-LAB, SE][PNP]

SmallWorldAntibioticsResearch2bBIOL 1065 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Focuses on research to discover new antibiotics to help alleviate the current worldwide crisis of antibiotic-resistant bacteria including microbial cell structure, growth, genetics and antibiotic production, DNA sequencing, PCR, nanopore-based genome sequencing, and bioinformatic analysis. Lab work will focus on determining, analyzing and 'mining' the genome sequence of antibiotic-producing bacteria isolated in BIOL 105, with the aim of discovering novel antibiotics. Strong emphasis on scientific inquiry including critical thinking, laboratory research methodology, and communication abilities. [GE, NS, NS-LAB, SE][PNP]

Introduction	to	Wildlife
BIOL 139		3 Credits/Units

3.0 hours of lecture

Wildlife conservation and management in the U.S. and throughout the world. Examines the social and political aspects of wildlife conservation and management, challenges to management of biodiversity, wildlife population management, and ecosystem management. [GE, NS, SE]

Mammais	OT		ine	r	vortnv	vest	
BIOL 140						3 Cre	dits/Units
3.0 hours of le	ecture						
Important ma	mmals of th	e Pacific I	Vorthwes	st. Their	identif	ficatio	on,
classification, [GE, NS, SE]	life historie	s, ecology	, current	status, a	ind ma	anage	ement.
Birds	of	The	Pacifi	с	Nor	thwes	st
BIOL 141						3 Cre	dits/Units
3.0 hours of le	ecture						
Important Bire	ds of the Pac	cific North	west. Th	eir ident	ificatio	on,	
classification,	life historie	s, ecology	, current	status, a	and ma	anage	ement.
[GE, NS, SE]							
Freshwater	Fishes	of	The	Pacific	;	North	west
BIOL 142						3 Cre	dits/Units
3.0 hours of le	ecture	·c					
Important fish	ies of the Pa	ICITIC NORT	hwest. Id	lentificat	lon, cl	assifi	ication,
Introduction t	ogy of fresh	water fish			viow o	west. f faat	ore
affecting saln	non in the Co	olumbia R	iver Basi	n. [GE. N	S. SEl	Tact	015
Pontilos	9. Amnh	ibiano	of	The	Dooif	Fio.	NIW/
BIOI 145	x Ampi	IDIAIIS	01	me	Facil	Cro	dite/I Inite
3.0 hours of le	ecture					0 010	unts/ Onnts
Introduction t	o the biology	v. ecoloav.	evolutio	n. and a	eograr	ohic d	istribution
of Pacific Nor	thwest reptil	les and ar	nphibian	s. [GE, N	S, SE]		
Marine			Biology	,			
BIOL 150						5 Cre	dits/Units
3.0 hours of le	ecture / 4.0 ł	nours of la	ıb				
The marine er	nvironment (physical a	nd chem	nical prop	perties	s), its	plants,
haotoria anim	al life (vorte	brotoo in	ortobrat	00) 000	ovetor	no fio	horioc

The marine environment (physical and chemical properties), its plants bacteria, animal life (vertebrates, invertebrates), ecosystems, fisheries and pollution. [GE, NS, NS-LAB, SE]

Human	Genetics
BIOL 167	
3.0 hours of lecture	

An introduction to a variety of genetics topics for non-science majors. Topics include: basic cell biology, DNA structure & function, mutations, inherited diseases, home genetic/ancestry testing, pedigree analysis, forensic sciences, gene therapy, cloning, eugenics, and realized and/or potential societal impacts. Gain greater knowledge & understanding of genetics and how it does/can impact you. [GE, NS, SE][PNP]

Bioethics

BIOL 180 3.0 hours of lecture

Study of biological science and ethics. Ethical principles and theories are used in solving bioethical dilemmas. Concepts studied include genetic engineering, inherited disorders, cloning, physician assisted suicide, allocation of health resources, organ donation, and environmental ethics. [GE, NS, SE][PNP]

Cooperative	Work	Experience
BIOL 199		1-5 Credits/Units
15.0 hours of clinical		

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. [GE]

Field	Studies	In	Biology	Human	Biology	W	/	Lab
BIOL 208			1-10 Credits/Units	BIOL& 175				5 Credits/Units
2.0 hours of le	cture / 16.0 hours	of lab	D. 1 (DIO)	4.0 hours of I	ecture / 2.0 hours	of lab		
Prerequisite:	Completion of a 100)- or 200-level	Biology course (BIOL,	Introductory	owner's manual to	the human	body for non-	science
BIOL&) grade (of "C" or higher		- La companya da contrata da constana d	majors. Gain	greater knowledge	e of how you	r body works	and more
For students I	nterested in biology	/. An ecologic	al approach with a diversity	confidence w	nen you encounte	r information	n about numa	n blology or
of nabitats be	ing visited (marine	in winter, Grea	at Basin Desert and marsh	communicate	e with doctors. Top	oics: rundam	ientais of che	nistry, cell
total of 15 oro	J). Creans for BIOL	zuo are accur		(o g digostiv	o oiroulotory roopi	rotory ondo	selected orga	n systems
total of 15 cie		trips. [GL, NS	, NO-LAD, OLJ	examples of l	e, circulatory, respi	ciated with	respective or	un systems I ab
Flowering	Plants of	The P	acific Northwest	simulations a	and activities reinfo	orce and ext	end lecture to	nics [GF NS
BIOL 224			5 Credits/Units	NS-LAB SE				pics. [OL, NO,
3.0 hours of le	cture / 4.0 hours of	f lab						
Identification a	and ecology of loca	il wildflowers	through the use of	Majors		Ecology/Evo	olution	
taxonomic key	s, preparation of s	becimens and	field trips to study native	BIOL& 221				5 Credits/Units
species in the	Ir nabitats. For fore	stry, wiidlife, r	ecreation, botany and non-	3.0 hours of I	ecture / 4.0 nours	of IBD" or big		222 (arada of "C"
	rinterested in learr	ing to recogn	ize local wildhowers. [GE,	Prerequisite.	BIOL& TOO (grade	or b or nig		ZZZ (grade of C
NS, NS-LAD, S	EJ			Third course	of three introducto	ru oourooo f	for life equation of	maiora Covera
Human	Cadaver		Dissection	Mendelian ge	or timee introducto	adaption en	or me science	indiversity
BIOL 275			1-6 Credits/Units	and ecology	BIOI & 222 is the fi	ret course ir	the three-co	irse series for
6.0 hours of la	lb			majors to be	taken prior to BIO	& 223 and I	RIOI & 221 [G	= NS NS-LAB
Department co	onsent required for	enrollment. D	issection of the muscular,	SEI				_,,,,
circulatory, ne	rvous, digestive and	d reproductive	e systems. [GE, SE]	Maiawa		O all/Mala		
Selected		Topics				Cell/Molec	cular	E Cradita/Unita
BIOL 280			1-5 Credits/Units	3 0 bours of l	ecture / 1 0 hours	oflab		5 Credits/Onits
5.0 hours of le	cture			Prerequisite	MATH 96 (grade o	of "C" or high	er) or placem	ent into Math
Selected topic	s in Biology. Topics	s vary, and cou	irse contents change to	level 50	in the so (grade o	i o or nigh	ci) or placetin	
reflect new top	bics. Because the c	ourse varies i	n content it is repeatable	First course of	of three introducto	rv courses fo	or life science	maiors.
for credit for a	interent topics. [GE,	, SEJ		Includes orga	anic chemistry, cell	structure, D	NA structure	and replication,
Special		Projects		gene express	ion, cell division, o	rganismal d	evelopment, n	nolecular
BIOL 290			1-5 Credits/Units	genetics and	biotechnology. BIC	DL& 222 is th	ne first course	in the three-
5.0 hours of le	cture			course series	for majors: to be t	aken prior t	o BIOL& 223 a	nd BIOL& 221.
Opportunity to) plan, organize, and	d complete sp	ecial projects approved by	[GE, NS, NS-L	.AB, SE]			
department. [C	jE]			Majors	Organis	mal	Phys	
Survey	of		Biology	BIOL& 223	5			5 Credits/Units
BIOL& 100			5 Credits/Units	3.0 hours of l	ecture / 4.0 hours	of lab		
3.0 hours of le	cture / 4.0 hours of	flab		Prerequisite:	BIOL& 222 (grade	of "C" or hig	her)	
Overview of ba	asic concepts and i	ssues in biolo	gy including the cellular	Second cours	se of three introduc	ctory course	s for life scier	ice majors.
basis of life, m	ietabolism, principl	es of inheritai	nce, evolution and diversity.	Covers the pl	nysiology of major	animal and	plant organ sy	vstems.
Strong empha	sis on the process		nquiry using critical	BIOL& 222 is	the first course in	the three-co	urse series fo	r majors, to be
biology major	and fulfille the lab	oratory coion		taken prior to	(second) BIOL& 2	23 and (thire	d) BIOL& 221.	[GE, NS, NS-LAB,
recommended	l course for other b		e English writing skills are	SEJ				
highly recomm	nended Required for	or psychology	majors [GF NS NS-I AB	Human	Anatomy	and	Physiology	I
SE]		, population of g		BIOL& 241				5 Credits/Units
Conorol	Diala		W/I ob	3.0 hours of I	ecture / 4.0 hours	of lab		
	BIOIOGY			Prerequisite:	BIOL& 160 (grade	of "C" or hig	her)	
3 0 hours of lo	oturo / 1 0 bouro of	flah	5 Greatts/Units	The first in a	two-term sequence	e exploring t	he relationshi	ps between
Introduction to	the study of the o	ell the basic (component of all	structure and	I function in the hu	man body. T	he sequence	is intended
living organier	ns Emphasis on or	all chemietry	structure metaboliem	as a prerequi	site for students p	lanning to m	hajor in Nursin	g, Dental
				Hygiene or ot	ther allied health p	rograms, or a	as lite science	e credit for non-

biology majors. Topics include homeostasis, terminology, histology,

systems. [GE, NS, NS-LAB, SE]

the integumentary, skeletal, articular, muscular, nervous, and endocrine

living organisms. Emphasis on cell chemistry, structure, metabolism, energetics, cell division and genetic principles. Intended for students seeking a two-year degree in the health occupations. Lab work is required. [GE, NS, NS-LAB, SE][PNP]

Human	Anatomy	and	Physiology	II
BIOL& 242				5 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Prerequisite: BIOL& 241 (grade of "C" or higher)

The second in a two-term sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive systems and fluid and electrolyte balance. [GE, NS, NS-LAB, SE]

Human	Α	&	Р	I
BIOL& 251				5 Credits/Units
3.0 hours of lea	cture / 4.0 hc	ours of lab		

Prerequisite: BIOL& 100, BIOL& 160, BIOL& 175, BIOL& 221, CHEM& 121, or CHEM& 141 (grade of "C" or higher)

The first in a three-term sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include homeostasis, terminology, cells, protein synthesis, DNA replication, histology, the integumentary, skeletal, articular, and muscular systems, and bone, muscle and membrane physiology. [GE, NS, NS-LAB, SE]

Human	Α	&	Р	Ш
BIOL& 252				5 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Prerequisite: BIOL& 251 (grade of "C" or higher)

The second in a three-term sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include homeostasis, neural tissue, the spinal cord and spinal nerves, the brain and cranial nerves, integration of neural function, the special senses, the endocrine and reproductive systems, development and inheritance. [GE, NS, NS-LAB, SE]

Human	Α	&	Р	III
BIOL& 253				5 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Prerequisite: BIOL& 252 (grade of "C" or higher)

The third in a three-term sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include homeostasis, the cardiovascular, lymphatic, digestive, respiratory and urinary systems, cellular metabolism, and fluid and electrolyte balance. [GE, NS, NS-LAB, SE]

Microbiology

BIOL& 260

5 Credits/Units

3.0 hours of lecture / 4.0 hours of lab

Prerequisite: BIOL& 160 (grade of "C" or higher)

History of microbiology and a survey of organisms included in the study of microbiology with emphasis on bacteria. Physiology, morphology, genetics, growth and reproduction of bacteria. Experiments stress lab techniques and organisms that are a factor in clinic and hospital environments. [GE, NS, NS-LAB, SE]