VANCOUVER ISLAND UNIVERSITY

Biology Articulation Committee Meeting, May 9-10, 2023

UBCO- Kelowna
Report from Vancouver Island University
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Course (credits)*	Course Name	Text	Projected Enrolment	Hours (/week)	Pre-requisites	Notes	Course Instructor
University Level Courses							
BIOL 121 (4)	Introductory Zoology	Hickman et al., Animal Diversity	180	3 lec 2 lab	BIO 11, LS 11, BIO 12 OR A&P 12	EVERY YEAR	TBD, Gorrell
BIOL 123 (4)	Introduction to Molec. Cell. Biol.	Morris et al. How Life Works	140	3 lec 2 lab	BIO 11, LS 11, BIO 12 OR A&P 12; CHEM 11 OR 12	EVERY YEAR	Affleck, Loudon
BIOL 156 (4)	Anatomy & Physiology (Nurs.)	Saladin, 9th ed., Anatomy & Physiology: The Unity of Form and Function. McGraw-Hill, 2021	100	3 lec 3 lab	BIO 12 OR A&P 12; CHEM 11 OR 12	EVERY YEAR	Sanders, McGrogan
BIOL 157 (4)	Anatomy & Physiology (Nurs.)	Saladin, 9th ed., Anatomy & Physiology: The Unity of Form and Function. McGraw-Hill, 2021	100	3 lec 3 lab	BIOL 156	EVERY YEAR	Sanders, McGrogan
BIOL 200	Cell Biology	Alberts, Essential Cell Biology	48	3 lec 1 ½ lab	BIOL 201; ORG CHEM 1	EVERY YEAR	Thomson

*Unless otherwise marked all courses are 3 credits

BIOL 201	Biochemistry I	Tymoczco, Berg and Stryer Biochemistry: A Short Course	64	3 lec 1 ½ lab	INTRO CHEM (O CHEM pre- or co-req)	EVERY YEAR	Thomson
BIOL 202	Ecology	Relyea, Ecology: The economy of nature. 9th ed.	48	3 lec 1 ½ lab	BIOL 121	EVERY YEAR	Janes
BIOL 210	Microbiology I	Wiley et.al., Prescott's Microbiology	48	3 lec 1 ½ lab	BIOL 123, 201, AND ORG CHEM 1	EVERY YEAR	Hernandez
BIOL 211	Microbiology II	Wiley et.al., Prescott's Microbiology	16	3 lec 2 lab	BIOL 210	EVERY YEAR	Hernandez
BIOL 212	Genetics	Hartwell et al., Genetics	48	3 lec 1 ½ tut	BIOL 201	EVERY YEAR	Affleck
BIOL 223	Botany	Freeman Biological Science	48	3 lec 1 ½ lab	BIOL 123	EVERY YEAR	Josefsson
BIOL 305	Animal Physiology	Sherwood et al. Animal Physiology: From genes to organisms	32	3 lec 3 lab	BIOL 200, 201	EVERY YEAR	McGrogan
BIOL 310	Invertebrate Zoology	Pechenik, Biology of the Invertebrates	16	3 lec 3 lab	BIOL 202	ALT. YEARS	TBD
BIOL 315	Parasitology	Goater, Goater & Esch, Parasitism: The Diversity and Ecology of Animal Parasites	16	3 lec 3 lab	BIOL 202	ALT. YEARS	TBD
BIOL 320	Aquatic Ecosystems	Kalff, Limnology	16	3 lec 3 lab	BIOL 202	ALT. YEARS	Demers
BIOL 322	Terrestrial Ecosystems	Chapin et al., Principles of Terrestrial Ecosystem Ecology	16	3 lec 3 lab	BIOL 202	ALT. YEARS	Janes
BIOL 325	Ornithology	Gill, Ornithology	16	3 lec 3 lab	BIOL 202	ALT. YEARS	Demers
BIOL 332	Microbial Ecology	Barton & Northrop, Microbial Ecology	16	3 lec 3 lab	BIO 210	EVERY YEAR	Loudon

BIOL 333	Laboratory Techniques	Winfrey, Unraveling DNA & other sources	16	3 lec 3 lab	BIOL 210, 212; ORG CHEM 1	ALT. YEARS	Hernandez
BIOL 334	Virology	Acheson, Fundamentals of Molecular Virology	16	3 lec 3 lab	BIOL 210	ALT. YEARS	Hernandez
BIOL 336	Bacterial Genetics	Snyder, Molecular Genetics of Bacteria	16	3 lec 3 lab	BIOL 210, 212	ALT. YEARS	Hernandez
BIOL 341	Molecular Cell Biology	Lodish, Molecular Cell Biology	16	3 lec 3 lab	BIOL 200, 212	ALT. YEARS	Affleck
BIOL 342	Biochemistry II	Lehninger, Principles of Bioch.	16	3 lec 3 lab	BIOL 201, ORG CHEM 1	EVERY YEAR	Josefsson
BIOL 345	Molecular Ecology	Selected readings	16	3 lec 3 lab	BIOL 202, 212	ALT. YEARS	Gorrell
BIOL 348	Genomics and Bioinformatics	Selected readings	16	3 lec 1.5 lab	BIOL 123, 212	ALT. YEARS	Janes
BIOL 350	Plant Biology	Taiz & Zeiger, Fundamentals of Plant Physiology	16	3 lec 3 lab	BIOL 212, 223	ALT. YEARS	Josefsson
BIOL 351	Pop. & Community Ecology	Krebs, Ecology	16	3 lec 3 lab	BIOL 202	ALT. YEARS	Gorrell
BIOL 357	Entomology	Gullan and Cranston, Outline of Entomology	16	3 lec 3 lab	BIOL 202	ALT. YEARS	TBD
BIOL 360	Animal Behaviour	Alcock, Animal Behaviour	16	3 lec 3 sem	BIOL 202	ALT. YEARS	Gorrell
BIOL 362	Biological Oceanography		16	3 lec	3RD YEAR SCIENCE	OCC.	TBD
BIOL 365	Biotechnology	Selected readings	16	3 lec	BIOL 123, 212	ALT. YEARS	Affleck, Josefsson, Loudon
BIOL 372	Plant Ecology	Gurevitch et al. The Ecology of Plants Selected readings	16	3 lec 3 lab	BIOL 202, 223	ALT. YEARS	Janes
BIOL 375	Ecological Methodology	Selected readings	16	2 lec 4 lab	BIOL 202, MATH 203	ALT. YEARS	Gorrell

BIOL 395	Tropical Biology	Kricher, A Neotropical companion	16	Field	BIOL 202	OCC.	Demers
BIOL 398	Advanced Topics in Biology		16	3 lec	6 cr. 2ND BIOL	OCC.	TBD
BIOL 402	Evolution	Zimmer & Emlen, Evolution: Making sense of life	32	3 lec	4TH YEAR	EVERY YEAR	Janes
BIOL 403	Current Topics in Biology	Selected readings	32	3 lec	4TH YEAR	EVERY YEAR	Sanders
BIOL 415	Ecological Parasitology	Goater, Goater & Esch, Parasitism: The Diversity and Ecology of Animal Parasites	16	3 lec 3 lab	BIOL 315	ALT. YEARS	TBD
BIOL 432	Applied Microbiology	Selected readings	16	3 lec 3 lab	BIOL 210	ALT. YEARS	Loudon
BIOL 434	The Microbiome	Selected readings	16	3 lec 3 lab	BIOL 210	Alt. YEARS	Loudon
BIOL 435	Immunology	Kuby, Immunology	16	3 lec 3 lab	BIOL 200	ALT. YEARS	Thomson
BIOL 436	Pathogenic Microbiology	Salyers & Whit, Bacterial Pathogenesis	16	3 lec 3 lab	BIOL 210	ALT. YEARS	Hernandez
BIOL 437	Epidemiology	TBA/Selected readings	16	3 lec 3 lab	BIOL 202, 210	ALT. YEARS	Sanders
BIOL 440	Cancer Biology	Selected readings	16	3 lec	BIOL 200, 212	OCC.	Stringham
BIOL 443	Developmental Biology	Gilbert, Developmental Biology	16	3 lec 3 lab	BIOL 200, 212	ALT. YEARS	Affleck
BIOL 445	Molecular Genetics	Strachan & Read, Human Molecular Genetics	16	3 lec 3 lab	BIOL 200, 212	ALT. YEARS	Josefsson
BIOL 457	Biodiversity & Conservation Biology	Cardinale et al., Conservation Biology. Schneider, Biodiversity Conservation in Canada.	16	3 lec	BIOL 202	ALT. YEARS	Janes

BIOL 465	Endocrinology	Readings from the primary literature	16	3 lec 3 lab	BIOL 200	ALT. YEARS	Thomson
BIOL 480	Work Experience in Biology	NA			15 UL BIOL CRED.	OCC.	all
BIOL 490	Directed Studies	NA			12 UL BIOL CRED.	OCC.	all
BIOL 491 (6)	Undergraduate Res (2 semesters)	Pechenik, A short guide to writing about Biology	16		18 UL BIOL CRED.	EVERY YEAR	all
BIOL 492	Teaching Undergraduate Biology	NA			Min. "A-" in BIOL course of assignment & instructor permission		all

No changes have been made to the Biology Program that necessitate changes to our portion of the flexible pre-major (FPM).

Detailed information for the Biology Program can be found here: https://scitech.viu.ca/node/84
A list of Biology courses can be found here: https://scitech.viu.ca/biology/biology-courses

Biology Department Faculty at Vancouver Island University 2023

Teaching Faculty

CO-CHAIR/BIOLOGY ADVISOR: Eric Demers, Ph.D.
Limnology, fish ecology, ornithology, environmental monitoring.

CO-CHAIR: Caroline Josefsson, Ph.D.
Plant biology, biochemistry, molecular genetics.

Joslynn Affleck, Ph.D.
Genetics, molecular biology.

Jamie Gorrell, Ph.D.
Vertebrate ecology, behavioural & population ecology, molecular ecology.

Mercedes Hernandez, Ph.D.
Microbiology, genetics, molecular biology.

Jasmine Janes, Ph.D.
Plant ecology, genomics, bioinformatics, evolutionary biology.

Andrew Loudon, Ph.D.
Microbial ecology, genomics.

Ita McGrogan, Ph.D.
Anatomy and physiology.

Susan Sanders, DVM, Ph.D.
Anatomy and physiology, epidemiology.

Catherine Thomson, Ph.D.
Anatomy and physiology, immunology, cell & molecular biology.

Emeritus Faculty

Tim Goater, Ph.D.
Invertebrate zoology, ecological parasitology.

Jane Watson, Ph.D.
Marine & community ecology, marine mammal biology, conservation biology.

Laboratory Technicians

Martin Angelstad, M.Sc.	Zoology, ecology, instrumentation.
Hitomi Kimura, B.Sc.	Molecular biology, anatomy and physiology, animal care
Keith Reidy, M.Sc.	Molecular biology, cell biology, genetics
Cecile van Woensel, M.Sc.	Microbiology, molecular biology (on leave)

Notes

In 2022, we had a failed search for a new invertebrate zoologist. Two candidates were offered the position but turned us down after reviewing salary levels compared to cost of living in Nanaimo. In hindsight, this might have been just as well as we've lost workload in the program due to low enrolment numbers.

Due to low enrolment numbers, presumably because of the pandemic, we have cut two sections from each of our first-year courses, and one section each from most of our second-year courses. Additionally, upper-level courses (two) taught by a faculty member who is on leave during 23/24 will not be offered, with the hope that other upper-level courses receive higher enrolment.

Our departmental budget was cut by 25% during the pandemic and has yet to be returned to pre-pandemic levels.

Current registration numbers for 23/24 are up slightly compared to 22/23. We hope to be on a trajectory of recovering our student numbers in 2-3 years from now.