

CURRICULUM GUIDE: OFFICIAL COURSE OUTLINE

Course Code	BIOL 204	Course Title	Introductory Ecology			
Credit Value	4	Department	Mathematics and Science			
No. of weeks	14	Hrs. per week	<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
			3	0	3	6
Course Description	This course introduces the basic principles of ecological theory relating to the structure and function of ecosystems.					
Prerequisite(s)	ENGL 100, BIOL 102					
Initial Articulation Targets	<i>UBC</i>	<i>SFU</i>	<i>UVic</i>	<i>UNBC</i>	<i>TRU</i>	
	BIOL_V 230 (3)	BISC 204 (3)	BIOL 215 (1.5)	BIOL 204 (3)	BIOL 2170 (3)	
	For updated information on the transferability of this course, please consult the BC Transfer Guide, www.bctransferguide.ca					
Learning Outcomes	<p>Upon successful completion of this course, the student will be able to:</p> <ul style="list-style-type: none"> • Apply taxonomic keys to identify coastal native plant species • Describe climatic variables that determine plant communities • Identify how different organisms cope with environmental variation • Calculate parameters of population dynamics and life history • Interpret interactions among individuals and species and discuss their consequences • Explain how nutrients and energy flow through ecological systems • Evaluate the impact of human activities on the Pacific Northwest • Predict how climate change will affect ecosystems. 					
Content	<p>Core topics – all of the following will be covered:</p> <ul style="list-style-type: none"> • Web of life and the physical environment • The biosphere and biomes • Coping with environmental variation: temperature, water, energy • Evolution and ecology • Life history and the distribution of populations • Population dynamics • Competition • Predation and herbivory and parasitism • Mutualism and commensalism • Community structure and change • Energy flow and food webs • Nutrient cycling 					



	<ul style="list-style-type: none"> • Climate Change, Conservation, and landscape ecology <p>Additional topics may also be covered, at the discretion of the instructor.</p> <p>Labs:</p> <ul style="list-style-type: none"> • Dichotomous keys and plant identification in the field • Point quarter, quadrat, and transect sampling • Diversity estimates • Measuring population growth • Estimating population size with mark-recapture • Observations on feeding competition • Soil invertebrate analysis • Leaf litter bag decomposition analysis 		
Methods of Instruction	Lectures, demonstrations, small group discussions, case study analysis, concept mapping, internet research, and field trips.		
Required Textbook(s)	<p>The following textbook(s) is/are required, or approved equivalent(s).</p> <p>Bowman, William D. et al. Ecology. 4th Edition. Oxford University Press, 2017.</p> <p>Pojar, Jim and Andy MacKinnon. Plants of Coastal British Columbia. Edmonton, Alberta: Lone Pine Publishing, 2004.</p>		
Required Equipment and Technology	<p>Students are required to have a computer with internet access.</p> <p>The following resources are provided by the College:</p> <ul style="list-style-type: none"> • Office 365 • Student email 		
Homework Hours	At minimum, students can expect one hour of homework for every hour of instructional time.		
Evaluation	<i>Component</i>	<i>% Value</i>	
	Quizzes and assignments	10-15%	
	Laboratory experiments and activities	15-20%	
	• Weight divided over 8 labs		
	Comprehensive laboratory exam	15-20%	
Midterm exam	15-20%		
Comprehensive final exam	30-35%		
Completion Requirements	The minimum grade to pass this course is D (50%). Unless otherwise stated, a minimum grade of C- (55%) is required for this course to fulfil a prerequisite.		
Course Designer(s)	Allan Arndt, Ph.D., (Head) Department of Biology, University of the Fraser Valley	Consultant(s), if applicable	Barbara Moon, Ph.D. Dean of Arts and Sciences. Professor Emeritus, Department of Biology, University of the Fraser Valley
Dean's Approval	Marv Westrom, Ph.D. Professor Emeritus, Faculty of Education, University of British Columbia	Dean's Approval Date	September 29, 2010



Curriculum Committee Approval Date	September 29, 2010	First Term Offered	Spring 2020
Last Review Date	September 1, 2024	Next Review Date	September 1, 2029
Revision History	February 14, 2023. Minor revisions and updates to grading ranges, textbook, topics covered by Mitra Panahi. September 1, 2024 – Laboratory assessments revised by Kelly Cheung. January 2, 2025 – English prerequisite increased to ENGL 100, effective Winter 2025		