Vancouver Island University

Bachelor of Science, Major in Biology, Major in Computer Science
Program Grid

Note: This program grid is provided for guidance only. Degree completion is based on courses completed successfully and is subject to all applicable requirements and procedures in effect. Students should consult the B.Sc. Degree Advisor to confirm program requirements for their chosen degree.

Course Number	Course Name	Credits	Upper-Level Credits	Notes
ENGL 115	University Writing and Research	3		
ENGL 204	Business and Technical Writing	3		
MATH 121	Calculus I	3		
MATH 122	Calculus II	3		
Non-Science 100-499	Non-Science Elective I	3		1
Non-Science 100-499	Non-Science Elective II	3		1
BIOL 121	Introductory Zoology	4		
BIOL 123	Intro. Cellular & Molecular Biology	4		
CHEM 140	Chemistry Fundamentals I	4		
CHEM 141 or 142	Chemistry Fundamentals II	4		
PHYS 111	Physics for the Life Sciences I	4		
PHYS 112	Physics for the Life Sciences II	4		
BIOL 200	Introduction to Cell Biology	3		
BIOL 201	Principles of Biochemistry	3		
BIOL 202	Ecology	3		
BIOL 210	Microbiology I	3		
BIOL 212	Genetics	3		
BIOL 223	Botany	3		
CHEM 231	Organic Chemistry I	3		
CHEM 232	Organic Chemistry II	3		
MATH 211	Statistics I	3		
BIOL 305	Animal Physiology	3	3	
BIOL 402	Evolution	3	3	
BIOL 403	Current Topics in Biology	3	3	
BIOL 300-499 Option	Specialization Course I	3	3	2
BIOL 300-499 Option	Specialization Course II	3	3	2
BIOL 300-499 Option	Specialization Course III	3	3	2
BIOL 300-499	Upper-Level Biology Elective I	3	3	3
BIOL 300-499	Upper-Level Biology Elective II	3	3	3
BIOL 300-499	Upper-Level Biology Elective III	3	3	3
BIOL 300-499	Upper-Level Biology Elective IV	3	3	3
CSCI 160	Computer Science I	4		
CSCI 161	Computer Science II	4		
CSCI 162	Topics in Computer Science	4		
MATH 123	Logic and Foundations	3		
CSCI 251	Systems and Networks	3		
CSCI 260	Data Structures	3		
CSCI 261	Comp. Architecture & Assembly Lang.	3		
CSCI 265	Software Engineering	3		
MATH 223	Discrete and Combinatorial Mathematics	3		
MATH 241	Linear Algebra	3		
CSCI 310	Intro. to Human-Computer Interaction	3	3	
CSCI 311	Web Programming	3	3	
CSCI 320	Foundations of Computer Science	3	3	
CSCI 330	Programming Languages	3	3	
CSCI 355	Digital Logic and Computer Organization	3	3	
CSCI 360	Intro to Operating Systems	3	3	
CSCI 370	Database Systems	3	3	
CSCI 400	Computers and Society	3	3	
CSCI 460	Networks and Communications	3	3	
CSCI 300-499	Upper-Level Computer Science Elective	3	3	4
CSCI 400-499	400-Level Computer Science Elective I	3	3	5
CSCI 400-499	400-Level Computer Science Elective II	3	3	5
	TOTAL:	168	66	

See notes on the next page /…

NOTES:

1. Non-Science Electives can be any courses outside of the Science discipline numbered 100-499. The following courses may not be counted to meet this requirement, although they may be counted as general electives:

   - Any course beginning with the following discipline identifiers: AQUA, ASTR, BIOL, CHEM, CSCI, ENGC, ENGE, ENGM, ENGR, FISH, FRST, GEOL, MATH, PHYS, RMOT, QUME, and SCIE.
   - Anthropology: ANTH 111, 213, 214, 341B, 342, 343, 344, 350, 351, 352, 353 361, 401, 430, 449, 460.
   - Geography: GEOG 211, 212, 221, 226, 228, 326, 328, 372, 373, 374, 376, 428.
   - Psychology: PSYC 204, 205, 300A, 300B, 301, 302, 305, 315, 316, 318, 319, 323, 324, 345, 365, 400, 415, 419, 445, 490, 491, 498A.
   - Physical Education: PHED 201, 220, 301, 302, 400, 401.

2. The Biological Specialization consists of 9 credits (3 courses) chosen from <u>one</u> of the following options:

   - Microbial Biology: BIOL 332, 334, 336, 337, 432 or 436.
   - Molecular and Cellular Biology: BIOL 341, 342, 435, 443, 445 or 465.
   - Aquatic and Terrestrial Ecology: BIOL 310, 315, 320, 322, 351 or 360.

3. Upper-Level Biology Electives can be any BIOL course numbered 300-499.

   - Students have the option to complete a research project in their final year: BIOL 490 (3 credits) or 491 (6 credits).
   - Students interested in taking BIOL 490 or 491 should consult the Chair of the Biology Department.

4. Upper-Level Computer Science Elective can be any CSCI course numbered 300-499, except CSCI 307, 308 and 309.

5. 400-Level Computer Science Elective can be any CSCI course numbered 400-499.