

# Bachelor of Science in Biology with Data Science Concentration

2024-2025 Catalog

In order to earn the Bachelor of Science in Biology degree from Seattle University, students must complete a minimum of 180 quarter credits with cumulative and major grade point averages of 2.0, including these courses:

			prereqs	credits	quarter?
<b>I. Core Curriculum Requirements:</b>	UCOR 1100	Academic writing seminar	–	5	
	UCOR 1300	Creative expression and interpretation	–	5	
	UCOR 1400	Inquiry seminar in humanities	–	5	
	UCOR 1600	Inquiry seminar in social sciences	–	5	
	UCOR 2100	Theological explorations	UCOR 1100	5	
	UCOR 2500	Philosophy of the human person	UCOR 1100	5	
	UCOR 2900	Ethical reasoning	UCOR 2500	5	
	UCOR 3100	Religion in a global context	UCOR 2100	5	
	UCOR 3400	Humanities and global challenges	75 credits + UCOR 1400	5	
	UCOR 3600	Social Science and global challenges	75 credits + UCOR 1600	5	

Note: UCOR 1200 and UCOR 1800 are not listed above; they are fulfilled by other Biology major requirements.

<b>II. Biology Requirements:*</b>	BIOL 1400	Biology First-Year Experience	1	F	
	BIOL 1610+1611	Cell and Molecular Biology + Lab	4+1	WS	
	BIOL 1620+1621	Evolution and Ecology + Lab	4+1	FW	
	BIOL 1630+1631	Physiology and Development + Lab	4+1	SF	
	BIOL 2600	Ecology	5	FS	
	BIOL 2700	Genetics	5	FWS	
	BIOL 2750+51/3150/ 4700/4750+51 (Cell/Molecular)	Biotechnology+Lab, Virology, Molecular Genetics, or Cell Biology+Lab	5-6	FS//F //W//FW	
	BIOL 2350/2520/3500/3650 (Field Biology/Biodiversity)	Invertebrate Zoology & Biodiversity Sciences, Plant Systematics, Evolution, or Marine Biology	5	F//S //W//S	
	BIOL 3250/3300/3850/3880 (Organismal Bio/Physiology)	Vertebrate Anatomy, Developmental Biology, Plant Physiology, or Animal Physiology	5	W//S //W//F	
	BIOL Electives**	= choose from BIOL ≥2210	15		
	BIOL 4991	Senior Synthesis I	2	F	
	BIOL 4992	Senior Synthesis II	2	W	
	BIOL 4993+4996	Senior Synthesis III + Seminar	1+1	S	

\*\*\* **Biology requirements:**

**62\***

<b>III. Other Major Requirements:*</b>	CHEM 1500+1501	General Chemistry I + Lab I	4+1	FW	
	CHEM 1510+1511	General Chemistry II + Lab II	4+2	WS	
	CHEM 1520 or 1590	General Chemistry III or Research-Focus GC III	4-5	SF//S	
	<b>CPSC 1220</b>	Data-driven Problem Solving and Programming	5	FW	
	<b>CPSC 2300</b> or CHEM 3000 or ENSC 3500	Intro. to Databases or Quantitative Analysis or Intro. to Geographic Info. Systems	5	W//FW //W	
	<b>MATH 1210 or 2310</b>	Statistics for Life Sci or Prob and Stats SciEng	5	FWS	
	MATH 1230 or 1334	Calculus for Life Sciences or Calculus I	5	FW//FWS	

<b>Physics</b> (pick a or b)	<b>a:</b>	PHYS 1050+1051	Mechanics	4+1	F	
		PHYS 1060+1061	Waves, Sound, Electricity, and Magnetism	4+1	W	
		PHYS 1070+1071	Thermodynamics, Optics, and Modern Physics	4+1	S	
	<b>b:</b>	PHYS 1210+1211	Mechanics	4+1	WS	
		PHYS 1220+1221	Electricity and Magnetism	4+1	SF	
		PHYS 1230+1231	Waves and Optics	4+1	FW	

\*\*\* **Other science requirements:**

**50**

\*\*\* **Total Major Curriculum Requirement credits required for graduation:**

**112**

\*Notes: 62 BIOL credits are required, including 25 credits of >3000-level courses and one plant course (BIOL 2520, 2530, or 3850).

In prerequisite courses, grades of at least C are required in biology courses and at least a C- are required in other sciences.

\*\*Suggested Biology Electives include: BIOL 2450 (Data Science for Biologists, 2cr), Bioinformatics (BIOL 2730, 5cr), Bioinformatic Project Lab (BIOL 3770), Biology Research: Development and Practice (BIOL 3990).

Consult professional schools for required prerequisite courses for programs. For example, some schools may not accept Advanced Placement credit; may require ≥1 quarter of Calculus or Statistics; or may require various programming languages.

Earn a Minor in Data Sciences by taking the boldfaced courses above and these courses: DATA 3310 and DATA 3320.