

Biology Major - Physiology and Behavior Option Guide 2022-23

Document available online at <https://ib.oregonstate.edu/advising/planners>.

The Physiology and Behavior option provides students with a rigorous background in the comparative physiology and behavior of animals. It explores how animals, including humans, contend with the challenges of life through their physiology and behavior. Students serious about research careers in physiology, behavior and other organismal biology should consider graduate work to increase opportunities, and completion of the Physiology and Behavior option is an excellent way to prepare. Students interested in animal care and some health professions might also consider this option. Courses used to satisfy the Physiology and Behavior option also count for the Organismal Biology, Physiology, Writing Intensive and Experiential Learning or Integrative Biology Elective for the Biology major. Other coursework taken abroad may be approved by the IB lead advisor. Students may pursue either the Physiology and Behavior, Pre-Dental, Pre-Medical or Pre-Veterinary Medicine options with the Biology major—no dual combinations are permitted. **Previous versions of this option are different and tracked in MyDegrees. All courses and prerequisites are subject to change, and the listing of term is based on projected Corvallis campus offerings.**

Core Courses

Course	Description (Credits)	Term(s)	Pre-/co-requisites	Comments
PSY 201	General Psychology (4cr)	All	-	-
BI 319	Critical Thinking & Comm. in Life Sciences (3cr)	F, W, SP	BI 221, 222, 223 (C-) & ST 351	-
Z 350	Animal Behavior (3cr)	W	BI 221, 222, 223 (C-)	-
Z 425	Embryology and Development (5cr)	F	BI 311, BB 314 (C-), junior+	-
Z 431	Vertebrate Physiology I (4cr)	W	BI 221, 222, 223 (C-) & CH 332*	*May be taken concurrently
Z 432 & Z 442	Vertebrate Physiology II (3cr) & Laboratory (2cr)	SP	Z 431 (C-)	-
Z 438	Behavioral Neurobiology (3cr)	SP	BI 221, 222, 223 (C-) & CH 233/263	-

Organismal Biology (select one course from the following)

Course	Description (Credits)	Term(s)	Pre-/co-requisites	Comments
Z 361 & Z 362	Invertebrate Biology (3cr) & Laboratory (2cr)	SP	BI 221, 222, 223 (C-)	-
Z 371 & Z 372	Vertebrate Biology (3cr) & Laboratory (2cr)	F	BI 221, 222, 223 (C-)	-
Z 461	Marine and Estuarine Invertebrate Zoology (4cr)	SU*	BI 221, 222, 223 (C-)	*Hatfield only

Experiential Learning or Science Elective Course

Select track I or II below

Track I: Experiential Learning Credits (complete any combination of three credits if taking only one course below)

Course	Description (Credits)	Term(s)	Pre-/co-requisites	Comments
BI 309 <u>or</u> BI 409	Teaching Practicum or Advanced Practicum (1-3cr)	F, W, SP	By departmental approval*	*See online forms here
BI 401	Research and Scholarship (1-3cr)	All terms	By departmental approval*	*See online forms here
BI 406	Projects: Curatorial Assistant (1-3cr)	All Terms	By departmental approval*	*See online forms here
BI 410	Internship (1-3cr)	All Terms	By departmental approval*	*See online forms here

Track II: Physiology and Behavior Elective Course

Course	Description (Credits)	Term(s)	Pre-/co-requisites	Comments
ANS 441	Topics in Animal Learning (3cr)	W	BI 221, 222, 223 (C-)	-
BB 360	Introduction to Neuroscience (3cr)	W	BI 221, 222, 223 (C-) & CH 233/263	-
BI 358	Symbiosis and the Environment (3cr)	W*	BI 221, 222, 223 (C-)	*Alternate even years
BI 485	Monster Biology (3cr)	W	BI 311*, BI 370*	*May be taken concurrently
PSY 330 <u>OR</u>	Brain and Behavior (4cr)	W, Sp	PSY 201, 202 (C-)	-
ANS 341	Animal Behavior and Cognition (3cr)	F	BI 221, 222, 223 (C-)	-
Z 422	Comparative/Functional Vertebrate Anatomy (5cr)	F	BI 221, 222, 223 (C-) & CH 332	-
Z 423	Environmental Physiology (3cr)	F	BI 221, 222, 223 (C-) & CH 233/263	-

OSU Physiology and Behavior Resources

International Opportunities:

Many [international programs](#) are available through OSU, some of which include internships that will be of interests to Physiology and Behavior option students. These programs can be integrated into a four-year plan with the Physiology and Behavior option.

Professional Experience:

Students are strongly encouraged to use the information below early in their careers as a starting point for exploring their interests in behavior Physiology and organismal biology.

- **Volunteering and internships:** Behavior, Physiology and other organismal biology opportunities exist in academic and government contexts. [Information on getting research experience beyond campus](#). Students can receive [BI 410 internship credit](#) for approved projects.
- **Undergraduate Research:** Students can get involved with research in any department at OSU, and research in behavior, physiology and other organismal biology takes place in Integrative Biology and many other units on campus. The best way to get involved in research is to approach a faculty member you would like to work with after reviewing their website. Faculty research interests can be found on all department websites, though it is easier to find on some than others. Positions generally require volunteering initially, but they can develop in to paid opportunities and BI 401 Research credit is also available for approved projects. See for [more information](#) on how to find a mentor, as well as possible departments to look in for faculty mentors. Students can also find excellent opportunities for research at other institutions. The [NSF REU](#) (Research Experiences for Undergraduates) program is an excellent and nationally competitive program that generally requires students have some experience.

Career Resources:

- [Animal Behavior Society](#)
- [American Physiological Society](#)
- [Society for Integrative and Comparative Biology](#)
- [Integrative Biology careers website](#)