

# BIOLOGY MAJOR—Physiology and Behavior Option 2020-21

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. Up to three credits of approved BI 401 Research or 410 Internship may be used as option electives. 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.**

<b>Required Courses</b>			
<b>Course</b>	<b>Pre(Co)requisites</b>	<b>Term</b>	<b>Credits</b>
PSY 201 General Psychology		All	4
BI 319 Critical Thinking & Communication in the Life Sciences	BI 221, 222, 223 (C-); ST 351	F, W	3
Z 350 Animal Behavior	BI 221, 222, 223 (C-)	W	3
Z 425 Embryology and Development	BI 311, BB 314 (C-), junior standing	?	5
Z 431 Vertebrate Physiology I	BI 221, 222, 223 (C-); CH 332- may be	W	4
Z 432 Vertebrate Physiology II <b>AND</b> Z 442 Laboratory	Z 431	SP	3+2
Z 438 Behavioral Neurobiology	BI 221, 222, 223 (C-)	SP	3
<b>Organismal Biology (select one course from the following)</b>			
Z 361 Invertebrate Biology <b>AND</b> Z 362 Laboratory	BI 221, 222, 223 (C-)	SP	3+2
Z 371 Vertebrate Biology <b>AND</b> Z 372 Laboratory	BI 221, 222, 223 (C-)	F	3+2
Z 461 Marine and Estuarine Invertebrate Zoology	BI 221, 222, 223 (C-) taught at Hatfield	SU	4
<b>Experiential Learning or Physiology and Behavior Elective (select track I or II below)</b>			
<b>Track I Experiential Learning (complete any combination of three credits below)</b>			
BI 401 Research and Scholarship	Departmental Approval	All Terms	1-3
BI 410 Internship	Departmental Approval	All Terms	1-3
<b>Track II Physiology and Behavior Elective Course</b>			
ANS 441 Topics in Animal Learning	BI 221, 222, 223 (C-)	W	3
BB 360 Introduction to Neuroscience	BI 221, 222, 223 (C-); CH 233/263	W	3
BI 358 Symbiosis and The Environment	BI 221, 222, 223 (C-)	Alternate?	3
BI 485 Monster Biology	BI 311, BI 370 (may be concurrent)	W	3
PSY 330 Brain and Behavior	PSY 201, PSY 202	W, SP	4
<b>OR</b> ANS 341 Animal Behavior and Cognition	PSY 201, PSY 202	F	3
Z 422 Comparative/Functional Vertebrate Anatomy	BI 221, 222, 223 (C-); CH 332	F	5
Z 423 Environmental Physiology	BI 221, 222, 223 (C-); CH 233/263	F	3

# OSU Physiology and Behavior Resources

## **Career Resources**

Animal Behavior Society:  
<http://www.animalbehaviorsociety.org>

American Physiological Society  
<http://www.the-aps.org/Default.aspx>

Society for Integrative and Comparative Biology  
<http://www.sicb.org>

Integrative Biology careers website  
<https://ib.oregonstate.edu/professional/careers>

## **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. For more information, visit:

<http://ib.oregonstate.edu/professional/international>

## **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. For opportunities beyond campus, students should see the listings at:

<http://ib.oregonstate.edu/professional/internship-research/intern-volunteer-list>.

Students can receive BI 410 Internship credit for approved projects. For details, visit:

<http://ib.oregonstate.edu/professional/research-internships>.

## **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 <http://ib.oregonstate.edu/professional/research-internships> 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. For details, visit:

<http://www.nsf.gov/home/crssprgm/reu/>