2007-08 BIOLOGY ADVISING BULLLETIN

Biology Program
2042 Cordley Hall
Corvallis, OR 97331-2911
541-737-2993
http://biology.science.oregonstate.edu

BIOLOGY STUDENT RESOURCES

Biology Program Office - Cordley 2042

- **Program Chair - Robert Mason** - 737-2993 or robert.mason@oregonstate.edu
- **Registration Coordinator - Trudy Powell** - 737-2993 or trudy.powell@oregonstate.edu
  Students should contact Trudy if they have difficulties getting into a Biology (BI) course.

Biology Advising

- **Transfer Students and Students Changing Majors:** All must meet with Brock once (see below).
- **Freshmen and Sophomores:** Appointments at http://biology.science.oregonstate.edu/preparing-advising-appointment
  A-N Brock McLeod, 2042B Cordley, 737-2245, mcleodb@science.oregonstate.edu
  O-Z Shawna Harvey, 2046 Cordley, 737-2404, shawna.harvey@orst.edu
- **Juniors and Seniors:** Juniors (and some other students) are assigned a faculty advisor after meeting with Shawna or Brock. If you do not know who your advisor is, contact Trudy Powell (see above).

Biology\OSU Student Information

- The **Biology Advising Checklist** http://biology.science.oregonstate.edu/checklists-and-bulletin
- The **Biology Program Website** http://biology.science.oregonstate.edu
- The **Biology Listserve (email list)** Subscribe to orst-biology at http://www.science.oregonstate.edu/node/125
- The **Biology Bulletin Board** outside Cordley 2042 also posts additional opportunities for students.
- The **General Catalog** and the **Schedule of Classes** http://catalog.oregonstate.edu/
- **Campus Information (737-0123)** can be called to contact any person or unit on campus.

BIOLOGY STUDENT OPPORTUNITIES

Options (areas of concentration) in Biology

Biology students can pursue a wide range of interests due to the breadth of the major, as well as research and internship opportunities, but some students concentrate on coursework in one of four transcript-visible options in Marine Biology, Genetics, Biotechnology and Pre-Education. Each option consists of 21 or more credits, and options are restricted to Biology students though selection of an option is not required. See checklists at http://biology.science.oregonstate.edu/checklists-and-bulletin for more information. **Students must register for options with the College of Science in Kidder 128.**

Health Profession and Pre-Vet Resources

Biology is an excellent major for students preparing for health careers such as medicine, dentistry, physicians assistant, pharmacy and optometry, as well as veterinary medicine. Interested students should sign up for the orientations below and see the checklist information at http://biology.science.oregonstate.edu/checklists-and-bulletin .

Pre-Health and Pre-Vet Orientation Courses

- BI 107 Pre-Dental Orientation - Winter
- BI 109 Pre-Medical Orientation - Spring
- EXSS 132 Allied Health Professions (PA, PT. OT, nursing, optometry, others) - Fall, Spring
- PHAR 201 Pre-Pharmacy Orientation - Fall
- VMB 110 Pre-Veterinary Med. Orientation - Fall

Undergraduate Research at OSU

http://biology.science.oregonstate.edu/undergraduate-research

Many research programs at OSU are nationally and internationally recognized, and it is common for undergraduates to help in labs on campus. Biology majors can work with researchers in any area of the life sciences at OSU. Students interested in being involved in research can contact faculty members they would like to work with directly and many opportunities are announced on the listserve. Students can also receive research credit by taking BI 401 Research.

Chemistry Minor (or other minors)

http://www.chem.orst.edu/undergrad/minor.html

A minor is not required, but students may choose to complete any minor listed in the OSU Catalog. Because biology majors take eight terms of chemistry, students can satisfy the chemistry minor by taking one additional course - most take CH 324, though some take CH 390. **Students interested in a specific minor should talk to the minor department and register for the minor with the college office the minor is listed under (Chemistry is in Science, Kidder 128).**

Internships/Jobs/Volunteering

http://biology.science.oregonstate.edu/research-internships-volunteering-and-jobs

Internships, volunteering and jobs range from work in agencies to research in industry to volunteering in local clinics. Some are well paid and some are for experience or credit (students can receive BI 410 Internship credit). Career Services (Kerr Admin 8, 737-4085) lists some opportunities and offers sessions on resume writing and interviewing, and the College of Sciences offers medical preceptorships for qualified juniors. Students are encouraged to seek placements on their own and should use the information compiled on the website above.

Pre-Education Opportunities and Resources

Students interested in teaching should take SED 407 Science and Math Pre-Education Orientation winter term and see the Pre-Education Option checklist http://biology.science.oregonstate.edu/checklists-and-bulletin . Juniors and seniors with a 3.00 GPA assist with labs of Biology 211, 212, and 213. Many find this experience a good review for professional school exams or GREs (Contact Deborah.clark@oregonstate.edu for 21X teaching).

Life Sciences, Health Professions & Other Clubs

The Life Sciences Club is open to any interested student. The club informs students about biological issues and career opportunities, as well as hosting fun activities like hiking and rafting. For more information, contact mcleodb@science.oregonstate.edu or look for listserve announcements. A list of over 300 more student clubs including those for health professions can be found at http://oregonstate.edu/studentinvolvement/.

Honors College

http://oregonstate.edu/dept/honors/

The University Honors College (UHC) offers smaller courses and challenging curricula taught by OSU's finest faculty in general education, as well as courses in biology and sciences. Each Biology UHC student must complete a research thesis project while at OSU, and the thesis can also be written to meet the requirements of the International Degree (see below). Biology has more Honors College Students than any other major at OSU, and students can easily complete the requirements for an Honors Degree in Biology in four years.

INTERNATIONAL OPPORTUNITIES IN BIOLOGY

For more information about any items below, go to http://biology.science.oregonstate.edu/international-and-national-exchange-opportunities .

International Internships

http://ie3global.orst.edu/

IE_3 Global Internships offers OSU students international internships as well as scholarships, loans, and academic credit (through Biology). Students can participate in an IE_3 Internships starting their junior year, and most financial aid can be used for them. For more information, see the Biology Study Abroad brochure, visit the IE_3 website or call 737-6464.

Internship Examples (many more available):

- Medical clinic work in India, Africa, or Mexico
- Conservation\Ecology\Field Biology in New Zealand, Australia, Costa Rica, Ecuador, & India
- Marine Biology research in Panama

Study Abroad

http://oregonstate.edu/international/students

Students accepted to study abroad program are able to take courses in another country that will count for their Biology major beginning sophomore year. Science courses are offered in counties such as Ecuador, Great Britain, New Zealand, Australia, Germany, France and many others. There are also language programs for students in many countries. Most financial aid can be used to pay for international programs. For further information, see the Biology Study Abroad brochure or the International Education website, or call 737-3006.

The International Degree

http://oregonstate.edu/international/students

The International Degree (ID) is a major obtainable *only* as a second degree, and more Biology students complete it than any other unit at OSU. To complete an ID a student must: (1) take 32 additional credits; (2) demonstrate fourth year proficiency in a foreign language; (3) spend a minimum of ten weeks abroad in an approved program, and (4) complete a senior thesis. For further information, see the Biology Study Abroad brochure or the International Degree website, or call 737-3006. **Students wishing to declare the ID must apply at the Office of International Education.**

BIOLOGY COURSES*

***Caution: Course offerings are subject to change. (see http://catalog.oregonstate.edu/ and http://catalog.oregonstate.edu/courseoutlook.aspx to confirm). Students should also see the Biology Advising Checklist http://biology.science.oregonstate.edu/checklists-and-bulletin for a list of major requirements.**

Course	Term Offered				Pre(Co)Requisites / Comments
	Fall	Winter	Spring	Summer	
Biological Core Courses					
BI 198	X				Required
BI 211 Principles of Biology (4)	X			X	
BI 212 Principles of Biology (4)		X		X	
BI 213 Principles of Biology (4)			X	X	
CH 121 General Chemistry (5)	X	X		X	High School Algebra
CH 122 General Chemistry (5)		X	X	X	High School Algebra
CH 123 General Chemistry (5)			X	X	High School Algebra
CH 221 General Chemistry (5)	X	X		X	High School Algebra and Chemistry
CH 222 General Chemistry (5)		X	X	X	High School Algebra and Chemistry
CH 223 General Chemistry (5)			X	X	High School Algebra and Chemistry
MTH 251 Calculus (4)	X	X	X	X	MTH 112
MTH 252 Calculus (4)	X	X	X	X	MTH 251
MTH 268 Calculus (4)			X		MTH 251
CH 331 Organic Chemistry (4)	X			X	One yr CH
CH 332 Organic Chemistry (4)		X		X	One yr CH; CH 331
CH 337 Organic Chemistry Lab (4)	X		X	X	CH 332
PH 201 General Physics (5)	X			X	MTH 111, MTH 112
PH 202 General Physics (5)		X		X	MTH 111, MTH 112
PH 203 General Physics (5)			X	X	MTH 111, MTH 112
BI 314 Cell and Molecular Biology (4)	X	X	X	X	BI 211, 212, 213; CH 331
BI 460 Cell Biology (3)		X			One yr BI; Pre/corequisite BB 350 OR BB 450;451
BI 461 Cell Biology Lab (2)		X			Pre/corequisite BI 460
BB 450 General Biochemistry (4)	X	X		X	CH 332; must be taken in order
BB 451 General Biochemistry (3)		X	X	X?	CH 332; must be taken in order
ST 351 Introduction to Statistical Methods (4)	X	X		X	
ST 352 Introduction to Statistical Methods (4)		X	X	X	ST 351
BI 311 Genetics (4)	X	X	X	X	BI 211, 212, 213; CH 331; BI 314 recommended taking BI 460
BI 370 Ecology (3)	X	X	X	X	BI 211, 212, 213
MB 302 General Microbiology (3)	X	X	X	X	CH 332; BI 314
MB 303 General Microbiology Lab (2)	X	X	X	X	MB 302 corequisite

Course	Term Offered				Pre(Co)Requisites / Comments
	Fall	Winter	Spring	Summer	
Organismal Biology					
BI 358 Biology of Symbiosis (3)		X*			One yr BI, One yr CH; * Offered alternate years
BOT 321 Introduction to Plant System. (4)			X		BI 213
BOT 416 Aquatic Botany (4)	X				BI 213
BOT 461 Introductory Mycology (4)	X				BI 213
MB 480 Parasitology (3)			X		BI 314 OR BB 450 OR Z361, MB 302
Z 361 Invertebrate Biology (3)			X		One yr BI; May be taken alone or with Z 362
Z 362 Invertebrate Biology Lab (2)			X		Z 361 pre/corequisite
Z 365 Biology of Insects (4)			X		One year biology
Z 371 Vertebrate Biology (3)	X			X	One yr BI; May be taken alone or with Z 372
Z 372 Vertebrate Biology Lab (2)	X			X	Z 371 pre/corequisite
Z 422 Comparative Anatomy (5)	?				One year of biology
Z 477 Aquatic Entomology (4)		X			BI 213, junior standing
BI 445 Evolution (3)	X	X	X		BI 311, BI 370 recommended
Physiology					
BOT 331 Plant Physiology (4)		X			BI 213, CH 223 OR CH 123
BOT 488 Environ. Physiology of Plants (3)		X			One course in plant physiology OR one ecology course
Z 423 Environmental Physiology (4)	X				One yr BI
Z 425 Embryology and Development (5)			X		Three years of biology
Z 430 Principles of Physiology (4)	X				BI 213 and CH 332
Z 431 Vertebrate Physiology (4)		X			BI 213 and CH 332
Z 432 Vertebrate Physiology (4)			X		BI 213 and CH 332
History of Science (all writing intensive - WIC)					
HSTS 415 Theory of Evol. & Modern Bio. (3)	X				Junior standing; Bacc Core (Sci., Tech., and Soc.)
HSTS 417 History of Medicine (3)		X		X	Junior standing; Bacc Core (Sci. Tech. and Soc.)
HSTS 425 History of the Life Sciences (3)			X		Junior standing, One yr science; Bacc Core (Sci., Tech., and Soc.)
Writing Intensive Course (WIC)					
HSTS 415, 417, and 425 (3) - See above					
BB/BI 317 Scientific Theory and Practice (3)			X		BI 213
BI 333 Understanding Environ. Problems (3)					One yr CH, One yr BI; Bacc Core (Sci., Tech., and Soc.)
BI 371 Ecological Methods (3)			X		BI 370
BI 388 Special Topics in Biology (3)			X		One yr BI
Pre-Professional and Orientation Courses					
BI 198 Biology Careers Seminar (1)	X				Required for Biology freshman
BI 107 Pre Dental Orientation (1)		X			
BI 109 Pre-Medical Orientation (1)			X		
EXSS 132 Intro. to Allied Health Profs. (1)	X	X	X		
PHAR 201 Pre-Pharmacy Orientation (2)	X				
SED 407 Sci. & Math Pre-Ed. Orientation (1)		X			OK for freshmen and sophomores to take
VMB 110 Pre-Vet. Med. Orientation (1)	X				