OSU BIOLOGY MAJOR ADVISING GUIDE 2024-25

(for use with MyDegrees)

CONTENTS

HOW AND WHY TO USE THIS GUIDE:

Welcome to Integrative Biology! The OSU Biology Major Advising Guide is your primary resource for planning your academic program. It also includes other resources important to your success. **You will use it frequently so bookmark the advising guides website for future reference (the document is frequently updated online).** The advising guides website also includes separate guides for the eight options (concentrations) you may elect to seek as part of your major.

This guide includes a list of all major requirements, course pre-requisites, and when courses are offered. This last point is particularly important because the online Catalog/Schedule of Classes only projects course offerings accurately to the next term and is not useful for planning a year (or years) ahead. Your major requirements are actively tracked in your MyDegrees checklist. But MyDegrees cannot tell you how and when to take what you have remaining. The information in this guide explains how to sequence your courses to complete your degree, and it is what you will use to plan out classes to discuss with your advisor.

STUDENT RESOURCES:

- **Integrative Biology (IB) resources:**
  - **IB Advising Office**, 2403 Cordley Hall, 541-737-2993, IB.advising@oregonstate.edu (see advising details below)
  - **IB Listserv:** You will be auto-subscribed and receive departmental updates in your OSU email.
  - **IB Website:** Information on careers, major and options, advising, experiential opportunities, and so much more!
    - **IB Club and others:** Participate in the Integrative Biology Club (IBC) or 100s of other organizations.
    - **IB experiential learning opportunities:** Explore a wide range of opportunities in research, internships, biological collections work, undergraduate teaching and study abroad.
    - **IB FAQs:** Many answers to important student questions.
- **Beaver Hub** allows you to make advising appointments and access numerous other student resources. Click on your Success Team in Beaver Hub to find your major (primary) advisor, and you should also review the appointment information below.
- **Academic Success Resources:**
  - **Science Success Center**, Kidder Hall 109, 541-737-3854, is open for registration and other assistance.
  - **Academic Success Center** resources include individual academic coaching and numerous other resources.
  - **Science tutoring centers** and **Supplemental Instruction Tables** for tutoring in a variety of introductory courses.
  - **OSU Academic Regulations** outline the regulations and procedures for all OSU students.
  - **OSU Academic Calendar** lists important quarter dates (OSU is on quarters, not semesters) and deadlines such as the last day to add or drop a course, last day to withdraw, registration dates and more.
- **OSU Dean of Students website** lists a variety of other resources and services to support you.

ACADEMIC PLANNING AND ADVISING:

The biology major includes core biological science, chemistry, math and statistics coursework that is mostly completed in the first two years along with much of the OSU Baccalaureate Core (general education). The electives portion of the biology major includes choices to cater to your interests. These require selecting one course for each category of Physics or Computer Science and Quantitative Applications, Biology and Society, Organismal Biology, Physiology, Writing Intensive Course, and Experiential Learning or Integrative Biology, generally in junior, senior or later years. The learning outcomes for the biology major can be found here.

Eight, transcript-visible options (concentrations) are available for you to declare in the biology major (but are not required). Options require a net of 15 additional credits beyond the base major because part of each one overlaps and stipulates specific courses in some major elective areas. Because of this, they may slightly alter the plans and courses outlined below. The option choices include ecology, genetics, marine biology, physiology and behavior, pre-dentistry, pre-education, pre-medicine (which has pathways for physician, physician assistant, pharmacy, optometry, and others) and pre-veterinary medicine. Many excellent professional goals do not have official options, and a variety of OSU minors may be beneficial in pursuing goals outside of the official options.

MyDegrees, available in your Beaver Hub is used with this **Biology Major Advising Guide** to plan your degree requirements.

- **MyDegrees Checklist** lets you view your completed courses for all declared programs (major, option, minor). View the MyDegrees Checklist tutorial.
- **The Biology Major Advising Guide** (this document) lets you plan how to complete the requirements you have remaining in the MyDegrees Checklist. There are additional guides for each of the eight options available for biology majors.
- **MyDegrees Planner** is where you store degree plans you create to share with your advisor. View the planner tutorial.

Your advisor is based on your major combined with your professional goals and/or option (if you choose to add one). You can view advisor contact and appointments information here. Students can meet for advising at any time, but use the table below to determine when you **must** meet for advising. Advisors will review the plans you create with your **Biology Major Advising Guide** and save in your **MyDegrees Planner**. They will also assist you with navigating challenges and integrating professional experiences while completing your degree requirements. Read more about the advisor/advisee responsibilities here , and check out the advising FAQs.

Who	Must Meet
First year student, those using military benefits, athletes, honors college	Each term
Sophomores	Winter term
Juniors	Winter term
Transfer students	First term after transfer
Seniors	As needed to review for graduation

ACADEMIC AND ADVISING POLICIES AND GUIDELINES:

- **Ecampus course access:** The biology major is not offered via Ecampus. Though some major courses are available via Ecampus, they may have restricted access and be unavailable to Corvallis students.
- **GPA requirements:** The biology major requires a 2.0 cumulative OSU and major GPA (includes coursework in declared options). The pre-medicine, pre-dentistry and pre-veterinary medicine options require a 3.0 major (not OSU) GPA.
- **Total credit requirements:** You must complete 60 upper division (300-400) and 180 total credits. The biology major and Bacc. Core courses alone do not total 180 credits. No more than 11 PAC or 15 ALS credits can be used to reach 180 required credits. The credit total tracked in My Degrees includes in progress courses.
- **C- for Biology (BI), Math (MTH), and Chemistry (CH):** All students must receive a C- or better in BI 221, 222 and 223; the CH 23x/26x series; and CH 331 and 332 to continue to courses that have these as prerequisites. Also, all math courses require a C- or higher in the previous math course in order to progress to the next one.
- **Double counting courses:** Courses from other majors, minors and Baccalaureate Core (Bacc. Core) courses may be counted for major requirements unless restricted by other programs. No courses may be shared within the major or within the Bacc. Core (even if listed in multiple areas). Option requirements clear major categories as noted and tracked in MyDegrees.
- **S/U and withdraw (W) grading:** Biology students cannot S/U major courses. All OSU students are allowed 18 withdraws.
- **Class Retakes:** Tell your advisor if you are considering retaking a course you first completed at OSU or another school, or if you are repeating an OSU course for the third time. Students should also review this retake information.
- **Restricted double or dual majors**: No combination of biology, biochemistry and biophysics, biochemistry and molecular biology, biohealth sciences, microbiology, or zoology majors is allowed. Other majors are possible.
- **Chemistry Minor:** A chemistry minor can be completed with one additional course (generally CH 324 Quantitative Analysis or CH 390 Environmental Chemistry). Contact your advisor for approval. CH 324 is major restricted until phase II registration, and students should consult the OSU Schedule of Classes or Chemistry Department for the timing of offerings.

REGISTRATION INFORMATION:

Registration Date: The OSU Office of the Registrar assigns all students a registration date and time each term based on total credits. Registration dates for the next term are posted around week 5 of the proceeding term (e.g. Winter term registration dates are released week 5 of fall term). To find out when you can register, login to Beaver Hub and click on "View Priority Registration Status" in week 5 the term before (detailed instructions here). Priority registration is divided into two phases. You can register for up to 16 credits in Phase I and waitlisting of courses becomes available in Phase II. If you need a registration PIN (see advising above), you will need to meet for advising before you can register. Plan ahead for this!

Course Restrictions: Courses are often restricted to ensure student access and success, and you can view restrictions (campus, major, prerequisites, class standing, etc.) for course sections in the OSU Academic Catalog (Schedule of Classes). See the registration issues and overrides section of the IB website for guidance on how to resolve registration issues that may come up.

BIOLOGY FOUR YEAR PLANS:

These tracks outline ways to complete the degree within four years, averaging 15 credits a term. Tracks are determined by where students start in math (ALEKS placement or transfer credits). The math sequences for OSU biology students is MTH 065 → 103 → 111Z → 112Z → either [MTH 227 & 228] or [MTH 251 & 252]. Courses are listed in order of priority based on prerequisites. Students taking fewer credits should focus on completing courses in earlier areas (higher priority) before considering the next area. You can review course descriptions at these links: BI courses, Z courses or all courses.

	Track 1: **Initial math placement MTH 103, 111Z, or 112Z**	**Track 2:** **Initial math placement MTH 227 or 251 (or credit for MTH 251 and 252)**
1st Priority (Year one?) ↓	• Start MTH (MTH 103, 111Z or 112Z) courses in Fall, continue each term • BI 197 or 198 Fall, BI 298 Spring • CH 231/261, 232/262, 233/263 • Two or more Bacc. Core courses a term: Prioritize. COMM 111Z and WR 121Z	• Start MTH (227 or 251) courses in Winter, continue each term • BI 197 or 198 Fall, BI 298 Spring • CH 231/261, 232/262, 233/263 • BI 221, 222, 223 • One Bacc. Core course a term: Prioritize COMM 111Z and WR 121Z

	Track 1 (continued)	**Track 2A: Two or more math courses remaining**	**Track 2B. One or no math courses remaining**
2nd priority (Year two?) ↓	• BI 221, 222, 223 • CH 331, 332, 337 • One Bacc. Core course a term: WR 227Z or 362 a priority • Finish MTH courses then ST 351, 352	• CH 331, 332, 337 • One Bacc. Core course a term: WR 227Z or 362 a priority • Fill in one BI course a quarter from: BI 370, BI 311, BB 314 • Finish MTH then ST 351, 352	• CH 331, 332, 337 • PH or computational track courses • One Bacc. Core course a term: WR 227Z or 362 a priority • Finish MTH then one BI course a quarter: BI 370, BI 311, BB 314
3rd priority (Year three?) ↓	• ST 351, 352 if not completed • PH or computational track courses • Writing Intensive Course • Fill in 1 major course a quarter from: BI 370, 311, BB 314, BI 445 • BB 450, 451 • One Bacc. Core course a term until finished	• PH or computational track courses • BB 450, 451 • Writing Intensive Course • One Bacc. Core a term until finished • BI course(s) not taken 2nd year, then major courses: BI 445, Organismal Biology, Biology & Society, Physiology, and MB 302 & 303	• BB 450, 451 • ST 351, 352 • Writing Intensive Course • One Bacc. Core a term until finished • BI course(s) not taken 2nd year, then major courses: BI 445, Organismal Biology, Biology & Society, Physiology, and MB 302&303
4th priority (Year four?)	• Major courses above not yet completed • Fill in with major courses below: Organismal Bio, Bio & Society, Physiology, MB302 & 303 • Experiential Learning, Integrative Biology Course, or complete option • Complete 180 credits, 60 upper division • BI 498 Assessment & Survey in final term	• Major courses above not yet completed • Experiential Learning, Integrative Biology Course, or complete option • Complete 180 credits, 60 upper division • BI 498 Assessment & Survey in final term	• Major courses above not yet completed • Experiential Learning, Integrative Biology Course, or complete option • Complete 180 credits, 60 upper division • BI 498 Assessment & Survey in final term

BACCALAUREATE CORE REQUIREMENTS:

The Baccalaureate Core (Bacc. Core) Curriculum promotes understanding of interrelationships among disciplines in order to increase students' capacities as ethical world citizens. Writing I, Math, and Communications must be completed in the first 45 credits. Some of the courses overlap major requirements and count for both the major and Baccalaureate Core (see notes below).

Skills: These courses build a foundation for success in other courses.

- **Fitness**: HHS 231 lecture & [HHS 241 or Physical Activity Course (PAC) course]
- **Math (1st year): Major requires calculus courses.** Math is a 1st term requirement and series is MTH 065 → 103 → 111Z → 112Z → either [MTH 227 & 228] or [MTH 251 & 252 until complete. A C- or better is required in math course prerequisites.
- **Writing I (1st year WR 121Z)**. Required in 1st year. Registration is by last name with A-G Fall, H-N Winter, O-Z Spring.
- **Writing II (2nd year): Major requires WR 227Z or 362.** Must take in 2nd year (in first 45 credits as a transfer student).
- **Speech (1st year): Major requires COMM 111Z.** Required in 1st year.

BACCALAUREATE CORE REQUIREMENTS (continued):

Perspectives: These build a broader understanding of our multi-faceted world. No more than two courses from any one department may be used to satisfy the perspectives requirements. Each listing represents a category with many course choices.

- **Biological Science, Physical Science**: **Major requires BI 221, 222, 223 and CH 231/261, 232/262, 233/263.**
- **Cultural Diversity** (pick one from list)
- **Literature and the Arts** (pick one from list)
- **Social Processes and Institutions (pick one from list or psychology if -interested in health and wellness career space)**
- **Western Culture** (pick one from list)

Difference, Power and Discrimination:

These address intersections of human identity and experience with institutionalized systems of inequity and privilege in the US.

Synthesis Courses:

These facilitate synthesis of information and experience. As such, they are completed after the other categories above. Courses used to fulfill the synthesis requirements may not be from the same department.

- **Contemporary Global Issues (CGI):** Taken junior/senior year, **some count toward major or option requirements**
- **Science, Technology, and Society (STS)**: Taken junior/senior year, **some count toward major or options requirements**

BIOLOGY MAJOR REQUIREMENTS:

Unless noted, these courses reflect Corvallis campus offerings. Check the OSU Schedule of Classes for other campus offerings. You can review course descriptions at these links: BI courses, Z courses or all courses.

Biology Core Courses:

Professional Development:

Take (either BI 197 or BI 198 depending on your professional goals) and BI 298 in first year.

Course	Description	Term(s)	Pre-requisites	Comments
BI 197	Professional Develop: Health Profession (1)	F	-	Human health & wellness careers
or BI 198	Professional Develop: Biology & Zoology (1)	F	-	Other, non-human health careers and pre-vet
BI 298	Professional Development for Biologists II (1)	SP	-	Required in 1st spring term

Math & Statistics:

Math is an OSU first year requirement and is always started in the first term based on it being required for chemistry which in turn is required for biology. The math sequence is MTH 065 → 103 → 111Z → 112Z → then either Calculus and Probability for Life Sci. [MTH 227 & 228] or Calculus [MTH 251 & 252], both of which work for the vast majority of professional goals. Students strongly interested in mathematics or careers strongly tied to math may want to take MTH 251/252, but others generally take MTH 227/228.

Course	Description	Term(s)	Pre-requisites	Comments
MTH 227	Calculus and Probability for Life Sci. I (4)	W, SP	MTH 112Z (C-)	Complete MTH 227 & 228 as series
& MTH 228	Calculus and Probability for Life Sci. 2 (4)	F, SP	MTH 227 (C-)	Complete MTH 227 & 228 as series
MTH 251	Calculus (4)	All	MTH 112Z (C-)	Complete MTH 251 & 252 as series
& MTH 252	Calculus (4)	All	MTH 251 (C-)	Complete MTH 251 & 252 as series

Take ST 351. then take either Intro to Statistical Methods II (ST 352) -or- Methods of Data Analysis (ST 411 & 412). Students who are particularly interested in statistics and currently involved in working with data can consider taking ST 411/412 in place of ST 352.

Course	Description	Term(s)	Pre-requisites	Comments
ST 351	Introduction to Statistical Methods (4)	All	MTH 111Z	-
& ST 352 **or**	Introduction to Statistical Methods II (4)	All	ST 351	Take ST 352 **or** take ST 411 and 412
ST 411	Methods of Data Analysis (4)	F, W	ST 351	Discuss this choice with an advisor
& ST 412	Methods of Data Analysis (4)	W, Sp	ST 411	Discuss this choice with an advisor

General Chemistry:

Course	Description	Term(s)	Pre-requisites	Comments
CH231 & 261	General Chem. and Lab (4+1)	F, W	MTH 111Z* or higher	*May be taken concurrently
CH232 & 262	General Chem. and Lab (4+1)	W, Sp	CH 231/261 (C-)	-
CH233 & 263	General Chem. and Lab (4+1)	F, Sp	CH 232/262 (C-)	-

Principles of Biology:

Course	Description	Term(s)	Pre-requisites	Comments
BI 221	Principles of Biology: Cells (4)	F, Su	CH 231/261*	*May be taken concurrently
BI 222	Principles of Biology: Organisms (4)	W, Su	BI 221 (C-); CH 231/261* (C-)	*May be taken concurrently
BI 223	Principles of Biology: Populations (4)	Sp, Su	BI 221 (C-); CH 231/261 (C-)	-

Organic Chemistry & Biochemistry:

Course	Description	Term(s)	Pre-requisites	Comments
CH 331	Organic Chemistry (4)	F, W	CH 233/263 (C-)	-
CH 332	Organic Chemistry (4)	W, Sp	CH 331 (C-)	-
CH 337	Organic Chemistry Lab (4)	F, Sp, Su	CH 332 (C-)	Completed after CH 331, 332
BB 450	General Biochemistry (4)	F, W	CH 332; BB 314 recommended	-
BB 451	General Biochemistry (3)	W, Sp	BB 450	-

Upper Division Biology Core:

Course	Description	Term(s)	Pre-requisites	Comments
BI 370	Ecology (3)	F, W, Sp	BI 221, 222, 223 (C-)	-
BI 311	Genetics (4)	F, W, Sp	BI 221, 222, 223 (C-)	-
BB 314	Cell and Molecular Biology (4)	F, W, Sp	BI 221, 222, 223 (C-); CH 233/263	-
MB 302/303	General Microbiology & Lab (3+2)	F, W, Sp	CH 332 & BI 221, 222, 223 (C-)	-
BI 445	Evolution (3)	F, W, Sp	BI 311	-

Biology Electives: Declaring an option will alter some categories below - see options for details.

Physics\Computational and Quantitative Applications:

Complete either Track I (Physics) or Track II (Computational and Quantitative Applications) which require similar total credits. Most health profession programs, both human and animal, require physics. Students in other areas of the life sciences have choices. The computer science and quantitative applications pathway includes one or more computer science courses along with a variety of courses examining the application of quantitative and computational skills and thinking in the life sciences.

Track I: Physics – complete three terms of physics (15 credits)

Course	Description	Term(s)	Pre-requisites	Comments
PH 201	General Physics (5)	F, Su	MTH 112Z or higher	-
PH 202	General Physics (5)	W, Su	MTH 112Z and PH 201	-
PH 203	General Physics (5)	Sp, Su	MTH 112Z and PH 202	-

Track II: Computational and Quantitative Applications – take 4 courses (13-15 credits)

Complete two computer science/quantitative reasoning courses – (BDS 211 and (CS 201 or BB 345)) -or- (BDS 310 and 311))

Course	Description	Term(s)	Pre-requisites	Comments
BDS 211 **&** CS 201 ***OR*** BB 345	Use & Abuse of Data: Critical Think. in Sci. (3) Computer Programming Non-CS Majors (3) Python for Molecular Biologist (3)	W, Sp W*, SU* F	MTH 111Z (C-) MTH 111Z (C-)	***Ecampus only**
OR BDS 310 **&** BDS 311	Foundation of Biological Data Sciences (4) Computational Approaches for Biol. Data (3)	F W	MTH 251 (C-) or MTH 227 (C-) BDS 310 (C-) or CS 161 (C-)	

Complete two additional computational and quantitative electives from the list below to complete track II

Course	Description	Term(s)	Pre-requisites	Comments
BB 485	Applied Bioinformatics (3)	W*	BI 221 (C-) & (BB 345, BDS 310, CS 161 or CS 201)	***Not offered W 2024**
BDS/CS 446	Networks in Computation Biology (3)	W*	MTH 251 (C-)	*See catalog
BDS 472	Advanced Computational Biological Data Analysis (3)	Sp	BDS 311 (C-) or 162 (C-) & BI 221 (C-)	*See catalog
BDS 475	Comparative Genomics (4)	W?*	BB 314 (C-) & BI 311 (C-)	*Alternate odd years
BDS 477	Population Genomics (3)	Sp	BDS 310 (C-)	-
BDS 478	Functional Genomics (3)	W	BB 314 (C-)	-
BI 456	Phylogenetics (4)	W*	(ST 352 or 411) & BI 311	*Alternate even years
BI 481	Biogeography (3)	W*	BI 370	*Alternate odd years
BI 483	Population Biology (3)	W	(BI 311 or 370 (& MTH 227 or 252) & (ST352* or 411*)	*May be concurrent
FW 433	Population Dynamics for Conservation (4)	Sp*	(FW 320 or BI 483) (C-) & (MTH 228 or 252) (C-)	*Alternate odd years
GEOG 360	GIScience I: GIS Info. Systems & Theory (4)	F, W, Sp	MTH 112Z, ST 351	-
GEOG 361 **or** 460	Quant. Geospatial Analysis & Modeling (4) GIS & Spatial Data Science (4)	W* Sp	GEOG 360 (C-), MTH 112Z(C-), ST 351(C-) GEOG 360 (C-), MTH 112Z (C-), ST 351(C-)	*Ecampus only -
OC 449	Ecol. Theories in Biol. and Fisheries Data (4)	Sp*	(MTH 228 or 252) (C-), ST 351 (C-), BI 370 (C-)	*Alternate even years
ST 415	Design and Analysis of Planned Experiments	Sp*	ST 352 or ST 411	*See catalog
ST 431	Sampling Methods (3)	F	ST 411*	*Or override

Biology and Society:

Take one of the following (or see option). All courses in this category also count within the Bacc. Core (see comments column after "BC"). These courses examine a social/cultural context within the life sciences.

Course	Description	Term(s)	Pre-requisites	Comments
AEC 351	Natural Resource Econ. & Policy (3)	W	Sophomore +; AEC 250, AREC 250 or ECON 201	*See catalog; BC: Contemporary Global Issues
AEC/ECON 352	Environmental Econ. & Policy (3)	F, Sp	Sophomore +; AEC 250 or ECON 201	*See catalog; BC: Contemporary Global Issues
BB 220	Cancer: Society's Malignant Shadow	Sp*	-	*See catalog; BC: Difference, Power & Discrimination.
BB 331	Introduction to Molecular Biology (3)	W*, Sp*	Sophomore +; CH 232 & 262	*BC: Science, Tech. & Society; **Ecampus only**
BB 332	Molecular Medicine (3)	F	Sophomore +; BI 221	BC: Science, Tech. & Society
BI 175	Genomes, Identities and Society (3)	Sp*	-	*Alternate odd spring terms; BC: Difference, Power & Discrimination
BI 306H	Environmental Ecology (3)	?*	BI 221, 222, 223 & CH 233/263	*See catalog; offered as Honors College only; BC: Contemp. Global Issues
BI 347	Oceans in Peril (3)	W	Sophomore +; BI 150 or 221	BC: Science, Tech. & Society
BOT 301	Human Impacts on Ecosystems (3)	W	Sophomore +; BI 221, 222, 223 & CH 233/363	BC: Contemporary Global Issues
BOT 324	Fungi in Society (3)	Sp	BI 221	BC: Science, Tech. & Society
FES/TOX 435	Genes, Chemicals in Agriculture (3)	Sp	Sophomore +	BC: Science, Tech. & Society
FW 350	Endangered Species, Society & Sustain. (3)	F	Sophomore +	BC: Science, Tech. & Society
H 312	HIV/AIDS and STIS in Society (3)	F, W, Sp	Sophomore +	BC: Contemporary Global Issues
HSTS 417	History of Medicine	All*	Sophomore +	*See catalog; BC: Science, Tech. & Society; **Ecampus only**
MB 330	Disease and Society (3)	W*, Sp*, Su*		*BC: Difference, Power & Discrimination, **Ecampus only**
REL/PHL 444	Biomedical Ethics	Sp	Sophomore +	*See catalog; BC: Science, Tech. & Society
Z 349	Biodiversity: Causes & Conservation (3)	F, W	Sophomore +	BC: Contemporary Global Issues

Organismal Biology:

Take one of the following (or see option)

Course	Description	Term(s)	Pre-requisites	Comments
BI 427	Paleobiology (4)	Sp	BI 221, 222, 223 (C-)	-
BOT 321	Plant Systematics (4)	Sp	BI 221, 222, 223 (C-)	-
BOT 416	Aquatic Botany (4)	F	BI 221, 222, 223 (C-)	-
BOT 461	Introduction to Mycology (4)	F	BI 221, 222, 223 (C-)	-
Z 361 & 362	Invertebrate Biology & Lab (3+2)	Sp	BI 221, 222, 223 (C-)	Z 361 and 362 are taken together
Z 371 & 372	Vertebrate Biology & Lab (3+2)	F	BI 221, 222, 223 (C-)	Z 371 and 372 are taken together
Z 422	Comparative/Functional Vert. Anat. (5)	F	BI 221, 222, 223 (C-)	-
Z 461	Marine & Estuarine Invertebrates (4)	Su*	BI 221, 222, 223 (C-)	*** Hatfield campus only**
Z 477	Aquatic Entomology (4)	W*	BI 221, 222, 223 (C-), junior +	*Alternate odd years

Physiology:

Take one of the following (or see option)

Course	Description	Term(s)	Pre-requisites	Comments
BI 331/341 & BI 332/342	Adv. Human Anat. & Phys. / Lab I & II ((3+2) & (3+2))	F, W	BI 221, 222, 223 (C-), CH 233/263 (C-), junior +	Must complete both terms of lecture and lab
BOT 331	Plant Physiology (4)	W	BI 221, 222, 223 (C-), CH 233/ 263 (C-)	-
BOT 488	Environmental Physiology of Plants (3)	W	BI 370	-
Z 423	Environmental Physiology (3)	F	BI 221, 222, 223 (C-); CH 233/263 (C-)	-
Z 425	Genetics & Development (4)	F	BI 311 & BB 314, junior +	-
Z 431	Vertebrate Physiology (4)	W	BI 221, 222, 223 (C-) and CH 332* (C-)	*May be taken concurrently

Writing Intensive Course (WIC):

Take one of the following (or see option). The Baccalaureate Core Writing I and II courses must be completed before WIC.

Course	Description	Term(s)	Pre-requisites	Comments
BI 319	Theory, Practice, Discourse Life Sci. (3)	F, W, Sp	BI 221, 222, 223 (C-), ST 351	Ecampus offerings <u>not</u> available Take WR 121 and WR 327 or 362 first
BI 371	Ecological Methods (3)	Sp	BI 370	Take WR 121 and WR 327 or 362 first

Experiential Learning or Integrative Biology Elective (if not completing an option):

Complete an addition course (not used for other major requirements) by completing Track I (Experiential Learning) or Track II (Integrative Biology Course). Experiential learning is not required and students must identify these opportunities and then apply for credit. More details can be found on the linked forms below.

Track 1: Experiential Learning – complete any combination of 3 credits of the following. Students must apply and be accepted to these courses before the term they intend to participate, and the courses include assignments beyond completing the experience.

Course	Description	Term	Pre-requisites	Comments
BI 309	Teaching Practicum (1-3)	All	Department application and approval	See form here
BI 401	Research (1-3)	All	Department application and approval	See form here
BI 406	Projects: Curatorial Assistant (1-3)	All	Department application and approval	See form here
BI 409	Advanced Teach Practicum (1-3)	All	Department application and approval	See form here
BI 410	Internship (1-3)	All	Department application and approval	See form here

Track 2: Integrative Biology Course – select one additional course not used for other major requirements.

Course	Description	Term	Pre-requisites	Comments
BI 333 & 343	Adv. Human Anat. & Phys. / Lab (3+2)	Sp	BI 332 and 342 (C-)	-
BI 353	Pacific NW Coastal Ecosystems (4)	Su*	BI 221, 222, 223 (C-)	*** Hatfield campus only**
BI 358	Symbiosis and the Environment (3)	W*	BI 221, 222, 223 (C-), CH 233/263 (C-)	* See Catalog, alternate even years
BI 375	Field Methods in Ecol. Restoration (4)	Su*	BI 221, 222, 223 (C-)	***Cascades campus only**
BI 427	Paleobiology (4)	Sp*	BI 221, 222, 223 (C-)	Cannot also be counted above
BI 456	Phylogenetics (4)	W*	ST 352; BI 311	*See Catalog, alternate even years, cannot also be counted above
BI 481	Biogeography (3)	W*	BI 370	*See Catalog, alternate odd years, cannot also be counted above
BI 483	Population Biology (3)	W	(BI311 or 370 & MTH 227 or 252) & (ST352* or 411*)	*May be taken concurrently, cannot also be counted above
BI 485	Monster Biology (3)	W	BI 311* & BI 370*, junior +	*May be taken concurrently
BI 495	Disease Ecology (3)	W*	BI 370 (C-)	*Alternate odd years
Z 350	Animal Behavior (3)	W, Sp	BI 221, 222, 223 (C-)	-
Z 361 & 362	Invertebrate Biology & Lab (3+2)	Sp	BI 221, 222, 223 (C-)	Cannot also be counted above
Z 365	Biology of Insects (4)	Sp*	BI 221, 222, 223 (C-)	***Ecampus only**
Z 371 & 372	Vertebrate Biology **AND** Lab (3+2)	F	BI 211, 212, 213 (C-)	Cannot also be counted above
Z 423	Environmental Physiology	F	BI 221, 222, 223 (C-); CH 233/263 (C-)	Cannot also be counted above
Z 425	Genetics & Development (4)	F	BI 311 & BB 314, junior +	Cannot also be counted above
Z 432 & 442	Vertebrate Physiology II and Lab (3+2)	Sp	Z 431 (C-)	
Z 438	Behavioral Neurobiology (3)	Sp	BI 221, 222, 223 (C-) & CH 233/263 (C-)	-
Z 473	Herpetology (4)	F*, Sp*	BI 221, 222, 223 (C-)	***Ecampus only**

BI 498 Senior Assessment and Survey:

BI 498 Senior Assessment and Survey is a self-paced CANVAS course that must be registered for and completed in your final term.

Course	Description	Term(s)	Pre-/co-requisites	Comments
BI 498	Senior Assessment and Survey (0)	All	Required registration in final OSU term	Self-paced course in your final term