

OSU BIOLOGY MAJOR ADVISING GUIDE 2022-23

(for use with MyDegrees)



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ADVISING INFORMATION:

Advisor and Advising Appointments:

Your advisor is based on your major combined with your option or professional goals. [You can view your advisor and make appointments here](#). Students can meet for advising at any time, but use this table to determine when you **must** meet for advising:

| 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 |

Other Contacts:

- **Department of Integrative Biology (IB) (where advisors are located):** Integrative Biology office, 4th Floor Snell, 541-737-2993, ib@oregonstate.edu
- **Integrative Biology Club (IBC):** All biology students are automatically members. Contact integrativebiologyclub@oregonstate.edu or see Facebook for upcoming events.
- **Science Success Center**, Kidder Hall 109, 541-737-3854, is open for registration and other help. Email sciencesuccess@oregonstate.edu or [Zoom](#) (passcode COSBEAVS).

Important Student Resources:

- **My Degrees**, available in your student online services, is used with this advising guide to plan your degree.
 - **My Degrees Checklist** lets you view your completed courses and remaining requirements for all declared programs (major, option, minor). View the [My Degrees Checklist tutorial](#) for details.
 - **My Degrees Planner** stores degree plans you share with your advisor. View the [Planner tutorial](#) for details.
- **Integrative Biology (IB) Website:** Student clubs, study abroad, internship, research and other engagement opportunities.
- **Integrative Biology (IB) Listserv:** Current students are auto-subscribed and receive departmental posts in their OSU email.

POLICIES & GUIDELINES:

- **GPA:** The Biology major requires a 2.0 cumulative OSU and major GPA to graduate. The Pre-Medicine, Pre-Dentistry and Pre-Veterinary Medicine options require a 3.0 major GPA. Major GPA includes coursework in any declared options
- **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 the other program restricts sharing. No courses may be shared within the major or within the Bacc. Core even though some are listed in multiple areas. Option requirements clear categories of the major as noted in the options and tracked in MyDegrees.
- **S/U and withdraw (W):** Biology students cannot S/U major courses. All OSU students are only allowed 18 withdraws.
- **Restricted double or dual majors:** No combination of Biology, Biochemistry and Biophysics, Biochemistry and Molecular Biology, Biohealth Sciences, Microbiology, or Zoology majors is allowed.
- **Biology Options and Minors:** Options are concentrations of coursework that are optional, transcript-visible, and may alter the plans below. They 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 ([see option planners here](#)). Many excellent professional goals do not have official options, and a variety of OSU minors may also be beneficial in pursuing these.
- **Chemistry Minor:** A Chemistry Minor can be completed with one additional course (generally CH 324 Quantitative Analysis, CH 390 Environmental Chemistry). Contact your advisor for approval. CH 324 is major restricted until phase II registration.
- **Class Retakes:** OSU academic regulations often result in retakes not working how students expect. 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 the retake information here](#).
- **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.

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. A C- or better is required in math course prerequisites. Once math is started based on placement, continue this sequence each term until completed MTH 065 → 103 → 111 → 112 → either [MTH 227 & 228] or [MTH 251 & 252]
- **Writing I (1st year WR 121).** Registration is by last name with A-G Fall, H-N Winter, O-Z Spring.
- **Writing II (2nd year):** Major requires WR 327 or 362. Must complete in first 90 credits (45 if transfer).
- **Speech (1st year):** Major requires COMM 111.

Perspectives:

These build a broader understanding of our multifaceted 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 (see list)**
- **Literature and the Arts (see list)**
- **Social Processes and Institutions (see list)** (Psychology for those interested in health and wellness career space)
- **Western Culture (see 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 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 → 111 → 112 → 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 years before progressing toward the next year.

| Math Placement | Track 1: Placed in MTH 103, 111, or 112 | Track 2: MTH 227 or 251 placement or credit | |
|----------------|--|---|---|
| Year 1 | <ul style="list-style-type: none"> Start MTH (MTH 103, 111 or 112) 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 111 and WR 121 | <ul style="list-style-type: none"> 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 111 and WR 121. | |
| Math Remaining | Track 1: Two or more math courses remaining | Track 2A: Two or more math courses remaining | Track 2B: One or no math courses remaining |
| Year 2 | <ul style="list-style-type: none"> BI 221, 222, 223 CH 331, 332, 337 One Bacc. Core course a term: WR 327 or 362 a priority Finish MTH courses then ST 351, 352 | <ul style="list-style-type: none"> CH 331, 332, 337 One Bacc. Core course a term: WR 327 or 362 a priority Fill in one BI course a quarter from: BI 370, BI 311, BB 314 Finish MTH then ST 351, 352 | <ul style="list-style-type: none"> CH 331, 332, 337 PH or computational track courses One Bacc. Core course a term: WR 327 or 362 a priority Finish MTH then one BI course a quarter: BI 370, BI 311, BB 314 |
| Year 3 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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. |
| Year 4 | <ul style="list-style-type: none"> 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 Major Field Test: Summer graduates take spring; all others take final OSU term | <ul style="list-style-type: none"> Major courses above not yet completed Experiential Learning, Integrative Biology Course, or complete option Complete 180 credits, 60 upper division BI 498 Major Field Test: Summer graduates take spring; all others take final OSU term. | <ul style="list-style-type: none"> Major courses above not yet completed Experiential Learning, Integrative Biology Course, or complete option Complete 180 credits, 60 upper division BI 498 Major Field Test: Summer graduates take spring; all others take final OSU term. |

BIOLOGY MAJOR REQUIREMENTS:

Unless noted, these courses reflect Corvallis campus offerings. Check the Schedule of Classes for offering at other campuses.

Biology Core Courses:

Professional Development:

Take (either BI 197 or BI 198) and BI 298 in first year

| Course | Description | Term(s) | Pre-/co-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 | - | Currently not always offered |

Math & Statistics:

Take either Calculus and Probability for Life Sci. (MTH 227 & MTH 228) -or- Calculus (MTH 251 & MTH 252)

| Course | Description | Term(s) | Pre-/co-requisites | Comments |
|-----------|--|---------|--------------------|----------------------------------|
| MTH 227 | Calculus and Probability for Life Sci. I (4) | W, SP | MTH 112 (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 112 (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)

| Course | Description | Term(s) | Pre-/co-requisites | Comments |
|-------------|--|---------|--------------------|---------------------------------|
| ST 351 | Introduction to Statistical Methods (4) | All | MTH 111 | - |
| & ST 352 or | Introduction to Statistical Methods II (4) | All | ST 351 | - |
| ST 411 | Methods of Data Analysis (4) | All | ST 351 | Genetics option requires ST 41x |
| & ST 412 | Methods of Data Analysis (4) | All | ST 411 | Genetics option requires ST 41x |

General Chemistry:

| Course | Description | Term(s) | Pre-/co-requisites | Comments |
|-------------|-----------------------------|-----------|-----------------------------|----------|
| CH231 & 261 | General Chem. and Lab (4+1) | F, W, Su | MTH 111 credit or placement | - |
| CH232 & 262 | General Chem. and Lab (4+1) | W, Sp, Su | CH 231/261 (C-) | - |
| CH233 & 263 | General Chem. and Lab (4+1) | F, Sp, Su | CH 232/262 (C-) | - |

Principles of Biology:

| Course | Description | Term(s) | Pre-/co-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-/co-requisites | Comments |
|--------|---------------------------|-----------|----------------------------|----------|
| CH 331 | Organic Chemistry (4) | F, W, Su | CH 233/263 (C-) | - |
| CH 332 | Organic Chemistry (4) | W, Sp, Su | CH 331 (C-) | - |
| CH 337 | Organic Chemistry Lab (4) | F, Sp, Su | CH 332 (C-) | - |
| 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-/co-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) | All | BI 221, 222, 223 (C-); CH 233/263 | - |
| MB 302/303 | General Microbiology & Lab (3+2) | All | CH 332 & BI 221, 222, 223 (C-) | - |
| BI 445 | Evolution (3) | F, W, Sp | BI 311 | - |

Biology Electives:

Declaring an option will alter these categories - [see options for details](#).

Physics\Computer Science and Quantitative Applications:

Complete either Track 1 (Physics) or Track 2 (Computer Science and Quantitative Applications)

Track 1: Physics - complete the physics series

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

Track 2: Computer Science and Quantitative Applications - complete (BDS 211 and BB 345) -or- (BDS 310 and 311) and two electives

| Course | Description | Term(s) | Pre-/co-requisites | Comments |
|-------------------------|---|---------|--|---------------------------------|
| BDS 211 & BB 345 | Use & Abuse of Data: Critical Think. in Sci. (3) Python for Molecular Biologist (3) | Sp F | MTH 251 (C-) or 227 (C-) | |
| 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-) | *MTH 227 students need override |

Track 2 Electives: Complete two elective courses from the list below to complete track 2

| Course | Description | Term(s) | Pre-/co-requisites | Comments |
|--------------------|---|---------|--|-----------------------|
| BB 485 | Applied Bioinformatics (3) | W | BI 221 (C-) & (BB 345, BDS 310, CS 161 or CS 201) | - |
| BDS/CS 446 | Networks in Computation Biology (3) | ?* | 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-) | - |
| 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 BI 370), MTH 251, (ST 351 or ST 411) | |
| FW 433 | Population Dynamics for Conservation (4) | Sp?* | (FW 320 or BI 483) (C-) & (MTH 228 or 252) (C-) | *See catalog |
| GEOG 360 | GIScience I: GIS Info. Systems & Theory (4) | F, Sp | - | - |
| GEOG 361 or 460 | Quant. Geospatial Analysis & Modeling (4) GIS & Spacial Data Science (4) | W F* | GEOG 360 (C-), MTH 112 (C-), ST 351(C-) GEOG 360 (C-), MTH 112 (C-), ST 351(C-) | - *Ecampus only |
| OC 449 | Ecol. Theories in Biol. and Fisheries Oceanography 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 | |

Biology and Society:

Take one of the following (or see option).

Note: all courses count within the Bacc. Core. Specifics on where in Comments column after "BC".

| Course | Description | Term(s) | Pre-/co-requisites | Comments |
|--------------|--|-------------------------|--|--|
| AEC 351 | Natural Resource Econ. & Policy (3) | W* | Sophomore +; MTH 111 | *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 | W | - | *See catalog; BC: Difference, Power & Discrimination. |
| BB 331 | Introduction to Molecular Biology (3) | Sp | Sophomore +; CH 232 & 262 | BC: Science, Tech. & Society |
| BB 332 | Molecular Medicine (3) | F | Sophomore +; BI 221 | BC: Science, Tech. & Society |
| BI 175 | Genomes, Identities and Society (3) | *Alternate winter terms | - | *See catalog; BC: Difference, Power & Discrimination |
| BI 301 | Human Impacts on Ecosystems (3) | W | Sophomore +; BI 221, 222, 223 & CH 233/363 | BC: Contemporary Global Issues |
| BI 306H | Environmental Ecology (3) | F* | BI 221, 222, 223 & CH 233/263 | *See catalog; offered as Honors College only; BC: Contemp. Global Issues |
| BI 345 | Introduction to Evolution (3) | Sp* | Sophomore + | * Ecampus only ; BC: Science, Tech. & Society |
| BI 347 | Oceans in Peril (3) | W | Sophomore +; BI 150 or 221 | BC: Science, Tech. & Society |
| BI 348 | Human Ecology (3) | Sp* | Sophomore + | * Ecampus only ; BC: Science, Tech. & Society |
| BI 420 | Viruses in Modern Society (3) | W* | BI 221?* | *See catalog; BC: Sci., Tech. & Soc.; *Alternate years |
| BOT 324 | Fungi in Society (3) | Sp | BI 221 | BC: Science, Tech. & Society |
| FES/TOX 435 | Genes, Chemicals in Agriculture (3) | Sp?* | Sophomore + | *See catalog; BC: Science, Tech. & Society |
| FW 350 | Endangered Species, Society & Sustain. (3) | F* | Sophomore + | *See catalog; BC: Science, Tech. & Society |
| H 312 | HIV/AIDS and STIS in Society (3) | All* | Sophomore + | *See catalog; 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) | ?* | | *See catalog; BC: Difference, Power & Discrimination |
| REL/PHL 444 | Biomedical Ethics | All* | 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-/co-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-/co-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 | Embryology & Development (5) | F | BI 311 & BB 314, junior + | - |
| Z 431 | Vertebrate Physiology (3) | 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)

| Course | Description | Term(s) | Pre-/co-requisites | Comments |
|--------|---|----------|-------------------------------|----------|
| BI 319 | Critical Thinking & Comm. Life Sci. (3) | F, W, Sp | BI 221, 222, 223 (C-), ST 351 | - |
| BI 371 | Ecological Methods (3) | Sp | BI 370 | - |
| BI 373 | Field Methods in Marine Ecology (3) | Sp | BI 370 or BI 351 | - |
| MB 385 | Infectious Diseases & Epidemics (3) | W | BI 221, 222, 223 | - |

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

Complete Track 1 (Experiential Learning), Track 2 (Integrative Biology Course)

Track 1: Experiential Learning – complete any combination of 3 credits of the following

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

Track 2: Integrative Biology Course – select one course

| Course | Description | Term | Pre-/co-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 450 | Marine Biology (15) | Sp* | BI 370 & ST 351 (352 recommended) | *Hatfield campus only |
| BI 454 | Evolutionary Genomics | Sp* | BI 311 | *See Catalog, alternate odd years, 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 & TH 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* | *May be taken concurrently |
| BI 495 | Disease Ecology (3) | W* | BI 370 (C-) | *See Catalog, alternate even years |
| Z 350 | Animal Behavior (3) | W | 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 Z 372 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 | Embryology & Development (5) | F | BI 311 & BB 314, junior + | Cannot also be counted above |
| Z 438 | Behavioral Neurobiology (3) | Sp | BI 221, 222, 223 (C-) & CH 233/263 | - |
| Z 461 | Marine & Estuarine Invert. Zoology (4) | Su* | BI 221, 222, 223 (C-); | *Hatfield campus only , cannot also be counted above |
| Z 473 | Herpetology (4) | F*, Sp* | BI 221, 222, 223 (C-) | *Ecampus only |

GRADUATION REQUIREMENTS:

1. [BI 498 Biology Major Field Test](#): Is offered fall, winter and spring terms. It must be completed in your final term (spring if planning to graduate in summer)
2. Complete all major courses and 180 total credits and 60 upper division credits (300-400 level). Note that Biology major and Bacc Core courses alone do not total 180 credits.
3. No more than 11 PAC, 12 MUP, or 15 ALS credits can be used to reach 180 required
4. Maintain a 2.0 average GPA for your degree AND major (tracked in My Degrees). Pre-Dentistry, Pre-Medicine and Pre-Veterinary Medicine require a 3.0 major GPA.