

Biology Majors Advising Packet



BOISE STATE UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
Department of Biological Sciences



Welcome to the Department of Biological Sciences at Boise State University. We offer a comprehensive undergraduate and graduate education that spans the breadth of the contemporary biological sciences and prepares students for real world careers. We have award winning professors who combine an enthusiasm for classroom teaching with cutting edge research.

The department is a vibrant place where more than 800 students currently pursue undergraduate or graduate degrees in biology. Even with this large number, faculty, and students work in close collaboration.

Undergraduate students pursue a broad-based and highly flexible biology curriculum and choose from one of four emphasis areas: General Biology Emphasis, Cellular, Molecular and Biomedical Emphasis, Ecology, Evolution, and Behavior Emphasis, or Secondary Education Emphasis. Every emphasis area is designed to allow students to tailor their degree to their specific interests and career goals.

We also offer a Master's Degree in Biology and a Master's Degree in Raptor Biology. We offer two doctoral programs, Biomolecular Sciences Ph.D and Ecology, Evolution, and Behavior Ph.D.

Kevin Feris - Department Chair

Advising Matters!

Hi – I'm **Clay Cox**, the assigned advisor for all biology majors. Feel free to make an appointment with me as often as you wish. I can get pretty busy right before and during registration each semester. It is better to look for an available advising appointment as soon as you can.

Office Location: SCNC 107A

Science/Education, [2133 W Cesar Chavez Ln](#), Boise, Ada, Idaho 83725

Book an appointment online at: <https://ccox.youcanbook.me/>

Regular Advising Schedule (In-person, phone, skype)

MWF 9:00am – 4:00pm (I take lunch from 12:00 to 1:00)

TTH 1:00pm – 4:00pm



Please book an appointment in advance for most advising services. I also offer “walk-in” advising hours. Walk-in appointments are reserved for quick questions, signing forms, and scheduling questions only. Please book a regular appointment for most advising services. **Always sign in on the iPad in the front Office.**

Walk-In Advising Schedule

TTH 9:00am – 12:00pm (I take lunch from 12:00 to 1:00)

Email Advising Questions: Feel free to send me an email if you have a short question or two. **Always include your student ID number with every email.** Email me at: ccox@boisestate.edu. You can also reach me by phone at 208/426-2843. Be aware that I don't answer the phone when I am with another student. I would actually prefer to receive an email instead!

Required Advising Holds

First time students (new and transfer) are required to meet with an advisor before they can register for their second semester classes. Book an appointment with me as soon as you see the Required Advising Hold appears on your student center.

We recommend meeting with an academic advisor regularly. Advising provides you with essential information along with important strategies for academic, personal, and professional success.

- Discuss your career goals and plans.
- Review classes, prerequisites, and schedules, keeping in mind possible curriculum changes that may not be listed in the catalog.
- Advisors can often provide helpful strategies for getting into closed classes, and can also act as your advocate. I also provide permission numbers for most classes in our department.
- Customize your degree requirements to complement your future educational or professional goals.
- Help ensure that required classes are completed in a timely manner, and that you are on schedule for graduation.
- Information about campus resources and understanding university policies.
- Allows your advisor to get to know you, so they can provide a reference if needed later for applications for employment or graduate and professional schools.

Getting the Most from your Biology Degree

Degree Progress & Course Scheduling

Accurately track your progress using the [Academic Requirements](#) report. Your advisor can always help – but it is best if you are able to monitor your own progress. Thinking about adding a different emphasis area or trying out a new major? Run a What-If Report – available from the same drop down menu as your Academic Requirements Report. This allows you to explore your options without actually changing your major. You can find additional information about requesting a permission number, course descriptions and more at <https://biology.boisestate.edu/advising/>.

Academic Requirements report: <https://registrar.boisestate.edu/degree-requirements/aar/>
Undergraduate Checksheets: <https://registrar.boisestate.edu/undergraduate/undergraduate-catalog/undergraduate-checksheets/>

Future Course Offerings: <https://biology.boisestate.edu/course-descriptions/future-course-offerings/>

Degree Tracker: <https://aasc.boisestate.edu/degree-tracker/>

Academic & Personal Success

The student handbook, created by the Office of the Dean of Students, is the best guide to find all the resources on campus. Visit the Dean of Students website for additional resources.

<https://deanofstudents.boisestate.edu/>

Take a look at the services provided by Advising and Academic Support Center; to see a full description of their services visit <https://aasc.boisestate.edu/>. Perhaps the most relevant for new biology majors are the Academic Success Resources like tutoring, workshops, and study skills development.

Tutoring services for many courses including Math, Biology, Chemistry, and Physics:

<https://aasc.boisestate.edu/tutoring/free-in-person-tutoring/>

Please talk to me if you are having any other issues that are impacting your ability to succeed. I can help you locate resources, make plans, and develop strategies to keep you successful!



Nearly one half of our incoming students are “First Generation.” This means you may be the first person in your immediate family to attend and complete college. Ask your advisor about the resources available for you and your family!

Student Diversity & Inclusion

<https://sdi.boisestate.edu/>

Career Advising

I am happy to help you explore the multitude of career opportunities available to biology majors. The best advice I can give you – start your career planning now! Make use of the services at the Career Center - <https://career.boisestate.edu/>. They can help you in every step of the career path starting with major exploration, planning your career, and the job search!

Get Involved!

Getting involved may mean more than you think, because the answer is as unique as you are. Boise State offers many opportunities for involvement through a wide range of events and activities, clubs and organizations, and programs. Use this site to find out more about the opportunities the Student Involvement and Leadership Center offers. <http://getinvolved.boisestate.edu/>

Join the Biology Club: Educational Outreach, Volunteer Work, Recreational Activities, Professional Development and more! <https://orgsync.com/40754/chapter>

Join the Biology Department Organization - <https://orgsync.com/140348/chapter>. This the best place to find internship, volunteer, research, and other events of interest to biology majors.

Internships

Internships are defined by the National Association of Colleges and Employers (NACE) as: “a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Internships give students the opportunity to gain valuable applied experience and make connections in professional fields they are considering for career paths; and give employers the opportunity to guide and evaluate talent”

Each year hundreds of Boise State students participate in internships with local, regional and national organizations. You can even travel abroad. You can have an internship experience with a large international company, a small start-up, state or federal agency or a nonprofit organization. Internships can vary; they can be paid or unpaid, for credit or not-for-credit, part-time or full-time. In recent years our biology students have worked with more than 70 community partners to complete a variety of internships. We highly encourage our biology students to find an internship experience. You may add up to four internship or independent study credits to your degree requirements.

<http://career.boisestate.edu/students/internships/>

Undergraduate Research Opportunities

Explore the biology department website - <https://biology.boisestate.edu/> to see the variety of faculty research, research centers, special collections, and other opportunities for undergraduate students to get involved in research. We have undergraduate students working in every research lab in our department! Those students play an important role in our research effort as well as learning valuable field and laboratory techniques.

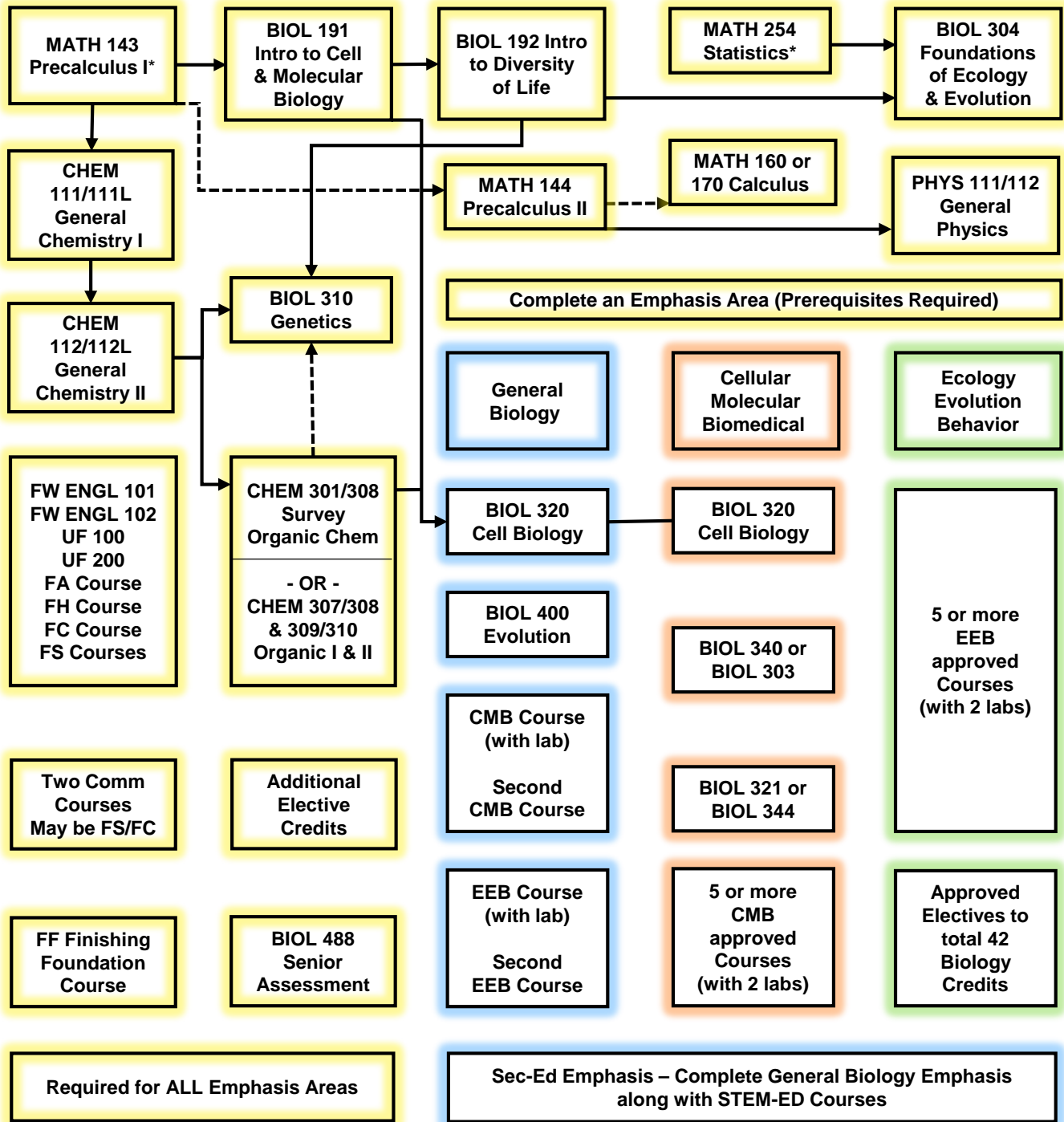
Vertically Integrated Projects

Vertically Integrated Projects (VIP) are project-based learning opportunities for students to work alongside faculty as they pursue ambitious research, industry, and community endeavors. Multi-semester participation encouraged, and students can enroll in 1-2 credits at the 200, 400, and 500 levels. Build skills, networks, mentorships and new horizons!

Institute for STEM & Diversity Initiatives

The Institute for STEM and Diversity Initiatives aims to build a diverse community of students, faculty, and others involved and invested in science, technology, engineering and mathematics. The primary goal of the Institute is to promote a culture of active inclusive excellence in STEM at Boise State University. The Institute fosters diversity in STEM through (a) advocating for and nurturing underrepresented student and faculty success inside and beyond the classroom, (b) strengthening avenues of communication and collaboration among University and external partners, and (c) conducting and catalyzing STEM educational research.

Degree Requirements - Biology, BS (General, CMB, EEB, SEC-ED)



Boise State University
Biology BS, 2018-2019

Name _____ ID# _____ Date _____

Course Number and Title	Credits	Completed	In Progress	Future
UF 100 Foundations of Intellectual Life	3			
UF 200 Foundations of Ethics and Diversity	3			
FW ENGL 101 Introduction to College Writing	3			
FW ENGL 102 Intro to College Writing and Research	3			
FM MATH 160 Survey of Calculus or FM MATH 170 Calculus I: Concepts and Applications	4			
FN BIOL 191 Biology I: Intro to Cell and Molecular Biology	4			
FN CHEM 111, 111L General Chemistry I with Lab	4			
FA Arts course	3			
FH Humanities course	3-4			
FS ED-CIFS 201 Foundations of Education (Secondary Education Emphasis) or FS Social Sciences course	3			
FS Social Sciences course in a second field or FS COMM 101 Fundamentals of Communication or COMM 112 Reasoned Discourse (Secondary Education Emphasis)	3			
BIOL 192 Biology II: Introduction to the Diversity of Life	4			
BIOL 304 Biology III: Foundations of Ecology & Evolution	4			
FC BIOL 306 Communication in the Biological Sciences	3			
BIOL 310 Genetics	3			
BIOL 488 Senior Outcomes Assessment	0			
CHEM 112, 112L General Chemistry II & Lab	4			
CHEM 301 Survey of Organic Chemistry (and CHEM 308) or CHEM 307, 308-309, 310 Organic Chemistry I & II with Labs (CHEM 301 is suitable for most biology majors. Those interested in medical, dental, pharmacy, veterinary school and students pursuing the Cell, Molecular, and Biomedical emphases should take CHEM 307-310. Please consult your advisor.)	5-10			
Two (2) or more of these communication courses including at least one (1) COMM course: COMM 101 Fundamentals of Communication COMM 112 Reasoned Discourse COMM 231 Public Speaking COMM 356 Communication in the Small Group ENGL 201 Nonfiction Writing ENGL 202 Technical Communication (COMM 101, COMM 112, and ENGL 202 may be counted as fulfilling all or part of FS requirements)	6			
Secondary Education Emphasis students: One (1) FS COMM course plus STEM-ED 310				
MATH 143 and MATH 144 Precalculus	5			
MATH 254 Introduction to Statistics	3			
PHYS 111-112 General Physics I & II or PHYS 211, 211L-212, 212L Physics I & II with Calculus & Labs	8-10			
FF BIOL 415 Microbial Physiology FF BIOL 485 Finishing Foundations Undergraduate Research and Internships in the Biological Sciences FF BOT 401 Plant Physiology FF ZOOL 401 Human Physiology FF ZOOL 409 Animal Physiology and Nutrition	2-4			
In addition, complete either the following coursework to graduate with a BS in Biology (without an emphasis) or complete the courses listed under one of the emphases below to graduate with a BS in Biology with an emphasis in either the Cellular, Molecular, and Biomedical Emphasis or the Ecology, Evolution, and Behavior Emphasis. To earn a BS in Biology with a Secondary Education Emphasis, complete the following coursework listed for the BS in Biology (without an emphasis) and the coursework listed under the Secondary Education Emphasis.				
BIOL 320 Cell Biology	3			
BIOL 400 Organic Evolution	3			
CMB course with a lab (see courses under Cell, Molecular, and Biomedical Emphasis)	4			
CMB course with or without a lab	3-4			
EEB course with a lab (see courses under Ecology, Evolution, and Behavioral Biology Emphasis)	4			

EEB course with or without a lab	3-4			
Physiology (one course) FF BIOL 415 Microbial Physiology FF BOT 401 Plant Physiology FF ZOO 401 Human Physiology FF ZOO 409 Animal Physiology and Nutrition	0-4			
Upper-division elective to total 40 credits	0-3			
Electives to total 120 credits	5-14			
Total	120			
Cellular, Molecular, and Biomedical Emphasis				
BIOL 320 Cell Biology	3			
BIOL 340 Molecular Biology Lecture or BIOL 303 General Microbiology (counts as one of two courses with lab)	3-5			
BIOL 321 Cell Biology Laboratory or BIOL 344 Molecular Biology Laboratory	2-3			
Five (5) or more additional courses chosen from the following for a minimum of 17 credits, at least 2 of the 5 courses must have a laboratory component identified by the *. (BIOL 303 can count as a lab) BIOL 321*, BIOL 344*, BIOL 410*, BIOL 412*, BIOL 415*, BIOL 420, BIOL 431, BIOL 440, BIOL 441, BIOL 442, BIOL 444, BIOL 446, BIOL 447, BIOL 449, BIOL 451, BIOL 452*, BIOL 454, BIOL 456*, BIOL 477, BOT 330*, BOT 401*, BOT 430, BOT 441*, CHEM 350, CHEM 431*, CHEM 433*, PHYS 307*, ZOO 301*, ZOO 400*, ZOO 401, ZOO 402, ZOO 403*, ZOO 409*, ZOO 411*	17-24			
Electives to total 120 credits Professional programs may require BIOL 227-228; CHEM 350	0-12			
Total	120-128			
Ecology, Evolution, and Behavior Emphasis				
Five (5) or more additional courses chosen from the following for a minimum of 17 credits, at least 2 of the 5 courses must have a laboratory component identified by the *. BIOL 303*, BIOL 320, BIOL 323*, BIOL 344*, BIOL 400, BIOL 406, BIOL 409, BIOL 410*, BIOL 412*, BIOL 413, BIOL 415*, BIOL 416*, BIOL 422, BIOL 424, BIOL 425*, BIOL 426, BIOL 427*, BIOL 433, BIOL 434, BIOL 435, BIOL 451, BIOL 461, BIOL 462, BIOL 463, BOT 302*, BOT 305*, BOT 330*, BOT 401*, BOT 424*, BOT 430, BOT 441*, ZOO 301*, ZOO 305*, ZOO 341*, ZOO 355*, ZOO 400*, ZOO 409*, ZOO 421*, ZOO 425*, ZOO 434*	17-24			
Upper-division ANTH, BIOL, BOT, CHEM, PHYS or ZOO 409* electives to total 42 Biology credits	0-6			
Electives to total 120 credits Professional programs may require BIOL 227-228; CHEM 350	0-14			
Total	120-122			
Secondary Education Emphasis				
STEM-ED 101 Step 1: Inquiry Approaches to Teaching	1			
STEM-ED 102 Step 2: Inquiry-based Lesson Design	1			
STEM-ED 210 Knowing & Learning in Math & Science	3			
STEM-ED 220 Perspectives on Science and Mathematics	3			
STEM-ED 310 Classroom Interactions	3			
STEM-ED 350 Research Methods	3			
STEM-ED 410 Project-based Instruction	3			
STEM-ED 480 Apprentice Teaching	6			
Total	126-138			

General Degree Requirements

Residency:

Upper-Division Credits:

Total Credits:

G.P.A.:

KIN-ACT:

Workshops:

Remarks: