Biological Sciences Student Guide 2019-2020



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Follow the department on social media to stay up to date on unique opportunities, deadlines, upcoming department events, and more!

Facebook Group: DePaulBio



Twitter and Instagram:@depaulbiodept

in LinkedIn Group: DePaul University Department of Biological Sciences

-For more information, please visit: http://go.depaul.edu/biology-

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Introduction

Welcome to the Biological Sciences Student Guide! This guide is intended to aid Biology students (both majors and minors) to successfully carry out their programs. We have tried to include a lot of the information students would find useful in scheduling their courses, deciding on electives to take, and thinking about their Biology degrees in the context of larger academic and career goals. Since there are always ongoing changes and last-minute substitutions, we apologize in advance for any errors or mistakes that are in the booklet. Please let us know of any errors you find, as well as any additional types of information you would like us to include. Our goal is to make sure every student has access to all of the information needed to complete our program and to help students succeed in their academic careers.

Contacting Us

Main Office: McGowan North, room 118 Phone: 773-325-7595 Hours: Monday-Friday, 9-5pm

Be sure to meet with your academic advisor at least once a quarter to ensure you are on track for completing the Biology major or minor at your desired graduation time. If you do not know who your academic advisor is, please check your BlueStar account through Campus Connect. Declared Biological Sciences majors will meet with the Departmental Academic Advisor, Jaimie Engle. Appointments can be made through BlueStar, by visiting the office, or by calling the front desk.

Department Newsletter: The Niche

The Niche is the DePaul Department of Biological Sciences newsletter. We hope to present you with information about our future plans and programs, our faculty, students, staff, alumni, and all the activities that make our department such an exciting community to be a part of. We are anxious to share news with you and we hope you find our newsletter both useful and informative. You can find our newsletter here: <u>https://csh.depaul.edu/academics/biological-sciences/about/Pages/niche-newsletter.aspx</u>

Cover Photo Captions:

(**Top Left**): A finch photographed by Dr. Stanley Cohn on a trip to the Galapagos Islands. Interested in visiting the Galapagos yourself? Check out DePaul's summer study abroad trip, "Ecuador: Galapagos-Evolution and Society", led by our very own Dr. Windsor Aguirre, an Evolutionary Biologist.

(**Bottom Left**): A photograph of Dr. Jalene LaMontagne and two of her student research assistants from the Huron Mountains of Michigan where they were collecting samples for their research. Dr. LaMontagne is a Population Ecologist and Quantitative Biologist.

(**Top Right**): A student conducting research in Cadiz, Spain. Photographed by a student in the course and DePaul Health Sciences alumna, Ashley Wagner 18'. Wagner participated in the department's summer study abroad trip, "Spain: Research Experience- From Atoms to Ecosystems, Science is Global". This course is co-led by Dr. Jason Bystriansky, a Comparative Physiologist.

(Bottom Right): The department's van put to good use in the "BIO 318: Field Studies in Marine and Estuarine Biology" course. This course is led by Dr. Timothy Sparkes, a Behavioral Ecologist. Enrolled students travelled to South Carolina to conduct research. Photo taken by a student in the course and DePaul Biological Sciences alumna, Natasha Wierzal 18'.

For more information on the study abroad opportunities, you can contact DePaul's Study Abroad Office: <u>abroad@depaul.edu</u>.

For more information on Bio 318, questions on how these opportunities can fit into your schedule, or how to get involved in faculty research, make an appointment with your Academic Advisor, Jaimie Engle, by calling the Biological Sciences Department's main office: 773-325-7595.

Faculty and Staff Contact Information

| Name | McGowan Office | Extension | E-mail |
|--|----------------------|-----------|--------------------------|
| Dr. Windsor Aguirre (Evolutionary Biology) | McGSo 221A | x58005 | waguirre@depaul.edu |
| Ms. Rima Barkauskas, M.S. (Senior Instructor) | McG 124 | x51891 | rbarkaus@depaul.edu |
| Dr. Margaret Bell (Neuroendocrinologist) (Joint-appointment with Health Sciences) | McG 122 | x57066 | margaret.bell@depaul.edu |
| Dr. Joanna Brooke (Microbiologist) | McG 203 | x51161 | jbrooke@depaul.edu |
| Dr. Jason Bystriansky (Physiologist) | McGSo 412F | x58726 | jbystria@depaul.edu |
| Dr. Sarah Connolly (Microbiologist) (Joint-appointment with Health Sciences) | McGSo 411 | x54498 | sconnol6@depaul.edu |
| Dr. John Dean (Plant Physiology) (Graduate Program Director) | McG 209 | x52188 | jdean@depaul.edu |
| Dr. Phillip Funk (Immunology) | McGSo 403J | x58479 | pfunk@depaul.edu |
| Dr. William Gilliland (Genetics) | McGSo 219A | x57464 | wgillila@depaul.edu |
| Dr. Jingjing Kipp (Physiologist) | McG 206 | x54646 | jkipp@depaul.edu |
| Dr. Dorothy Kozlowski (Neurobiologist) | McG 106 | x52191 | dkozlows@depaul.edu |
| Dr. Jalene LaMontagne (Ecologist) | McG 123 | x57272 | jlamont1@depaul.edu |
| Dr. Elizabeth LeClair (Develop. Biol.) | McG 109 | x57462 | eleclair@depaul.edu |
| Dr. Carolyn Martineau (Senior Instructor) | McG 114 | x57198 | cmart107@depaul.edu |
| Dr. Eric Norstrom (Neurobiologist) | McGSo 412G | x52091 | enorstro@depaul.edu |
| Dr. Talitha Rajah (Cancer Biology) | McGSo 223A | x58006 | trajah@depaul.edu |
| Dr. Megan Schrementi (Laboratorian) | McG 113 | x52184 | mschreme@depaul.edu |
| Dr. Kenshu Shimada (Paleobiology) (Joint-appointment with Environmental Science) | McGSo 203 | x54697 | kshimada@depaul.edu |
| Dr. Margaret Silliker (Molecular Biology) (Department Chair) | McG 239 & McG 115 | x52194 | msillike@depaul.edu |
| Dr. Timothy Sosa (Evolution & Ecology) | | | |
| Dr. Timothy Sparkes (Aquatic Biology) | McG 236 | x54749 | tsparkes@depaul.edu |
| Adjunct Faculty | McGSo 403H | x 58477 | slim21@denaul.edu |
| Mrs. Claire Behrens, M.S. | McG 111 | x51557 | cbehren1@depaul.edu |
| Dr. Terry Fitzpatrick | McG 209 | x58486 | tfitzpat@depaul.edu |
| Dr. Richard Hudson | McG 111 | x54787 | rhudson5@depaul.edu |
| Dr. Jessica Pamment | McG 111 | x57272 | jpamment@depaul.edu |
| Dr. Sarah Richardson | McG 111 | x51567 | sricha10@depaul.edu |
| Dr. Kate Soderstrom | McG 111 | x51557 | ksoderst@depaul.edu |
| | | | * |
| <u>Academic Advisor</u> Jaimie Engle, M.S. | McG 121 | x58636 | jengle@depaul.edu |

Outline of Biology Curriculum

All Biology Majors Have the Following Requirements:

Liberal Studies Requirements (differs from University **Honors Requirements):** • 2 Composition Courses (WRD 103 and 104) • 2 Freshman Seminar Courses (LSP110/111 and LSP 112) • 1 Sophomore Multicultural Seminar Course (LSP 200) **Biochemistry** 1 Experiential Learning Course* • 1 Senior Capstone Course (BIO 395) • 3 Arts & Literature Courses Sequence One: 2 Philosophical Inquiry Courses ٠ Calculus I 2 Religious Dimensions Courses Calculus II 3 Social, Cultural and Behavior Inquiry Courses Sequence Two: 2 Historical Inquiry Courses **Biological Sciences Core** ٠ General Biology I, II, and III for Science Majors ٠ • **Biostatistics** • Sequence Three: Genetics • • **Biology Concentration Requirements** Sequence Four: See page 7 •

Open Electives: number varies depending on transfer credit and degree requirements. Students must graduate with a minimum of 192 credit hours. Please speak with your advisor regarding your credit hours and graduation reauirements.

Allied Field Requirements

- General Chemistry I, II, and III (with Lab)
- Organic Chemistry I & II (with Lab)
- Organic Chemistry III (with Lab) or Principles of
- General Physics I, II, & III
- Mathematics (Choose 1 of 5 sequences)
 - Calculus w/ Integrated Precalculus
 - Calculus w/ Integrated Precalculus II
 - Calculus w/ Integrated Precalculus III
 - Calculus for Mathematics and Science Majors I
 - Calculus for Mathematics and Science Majors II
 - Calculus for Life Sciences I
 - Calculus for Life Sciences II
 - Sequence Five:
 - Summer Calculus I
 - Summer Calculus II

*Experiential Learning Course can be filled in several ways. We currently have two courses specifically for Biology students:

- BIO 302 provides instruction about teaching Biology; great for students interested in being a teaching assistant in General Biology labs.
- BIO 303 provides instruction about Biological research; great for students who are involved with lab-based research at DePaul.
- There are also numerous study abroad opportunities or service-based learning courses that can fulfill the experiential learning requirement, as well as the University Internship Program (UIP) courses offered through the Career Center. Please keep in touch with your advisor to learn about course offerings that will apply to the experiential learning requirement.

Liberal Studies Requirements differ for students in the Honors Program. Please meet with the CSH Honors Advisor, Nancy Grossman, for specific Honors Program inquiries. Nancy Grossman can be reached at ngrossma@depaul.edu.

Additional Graduation Requirements

- No grade lower than a C- is acceptable in a student's major, minor or allied field.
- Students must have a minimum of 2.000 cumulative grade point average.
- Students must have a minimum of 2.000 cumulative grade point average in the major, minor or allied field.
- Students must abide by the university residency requirement. The student must have completed the following work at DePaul University: the final 60 quarter hours of credit; one-half of the credit earned in the major area of concentration; one-half of the credit earned in the minor if applicable; all courses in the senior year.

Class Standing

Freshmen: 0-43 credit hours Sophomores: 44-87 credit hours Juniors: 88-131 credit hours Seniors: 132 credit hours or above

Basic Timeline for Entering Students

| (Most Applicable for In | tegrative Concentrations) | | |
|-------------------------|------------------------------|---------------------------|--------------------------|
| | Autumn Quarter | Winter Quarter | Spring Quarter |
| | BIO 191 | BIO 192 | BIO 193 |
| YEAR 1 | CHE 130/131 | CHE 132/133 | CHE 134/135 |
| | WRD 103 | WRD 104 | Learning Domain |
| | LSP 110/111 Explore/Discover | LSP 112 Focal Point | LD or Math Pre-requisite |
| | Chicago | | |
| | BIO 206 Statistics | BIO 250 Cell Bio | BIO 260 Genetics |
| YEAR 2 | CHE 230/231 | CHE 232/233 | CHE 234/235 or CHE 346 |
| | BIO 215 or 235 | Learning Domain | Learning Domain |
| | Learning Domain | LSP 200 Sem Multicultural | Learning Domain |
| | BIO Elective | BIO Elective | BIO Elective |
| YEAR 3 | PHY 150* | PHY 151 | PHY 152 |
| | Calculus I | Calculus II | Learning Domain |
| | Learning Domain | Experiential Learning | Open Elective |
| | BIO Elective | BIO Elective | BIO Elective |
| YEAR 4 | Learning Domain | BIO Elective | Learning Domain |
| | Learning Domain | Learning Domain | Open Elective |
| | Open Elective | Open Elective | BIO 395 Senior Capstone |

*Students who wish to enter medical school directly after graduation should take physics during sophomore year. This timeline may not be applicable to other concentrations. See your advisor to create a long-term plan specific to your academic needs and career goals.

Math Placement

Below is a math path that is useful in determining your math placement. Some pre-requisite notes:

- MAT 130 is the pre-requisite for General Biology I and General Chemistry I
- MAT 131 is the pre-requisite for Calculus I and Physics I
- MAT 147/148/149 Calculus with integrated precalculus. MAT 131 is not needed before taking this sequence. MAT 147 is only offered in the fall quarter; MAT 148 is only offered in the winter quarter; MAT 149 is only offered in the spring quarter. Note: some graduate programs will not take this sequence as the calculus pre-requisite.
- Students only need to complete two calculus courses (i.e. MAT 150/151) to complete the math requirement for the biology major. <u>If students choose to take MAT 147</u>, they must complete 148 and 149.
- MAT 150/151– Standard calculus. MAT 150/151 are each offered every quarter
- The MAT 160/170 sequences are offered infrequently.



| Required Biology Courses by Concentration | | | | | | |
|--|--|---|---|---|--|---|
| Integrative | Cell & Molecular | Ecology & Evolution | Medicine & Health* | Microbiology & Biotechnology | Neuroscience | Physiology |
| CORE (20 hours): | CORE (20 hours): | CORE (20 hours): | CORE (20 hours): | CORE (20 hours): | CORE (20 hours): | CORE (20 hours): |
| BIO 191 General Bio. I | BIO 191 General Bio. I | BIO 191 General Bio. I | BIO 191 General Bio. I | BIO 191 General Bio. I | BIO 191 General Bio. I | BIO 191 General Bio. I |
| BIO 192 General Bio. II | BIO 192 General Bio. II | BIO 192 General Bio. II | BIO 192 General Bio. II | BIO 192 General Bio. II | BIO 192 General Bio. II | BIO 192 General Bio. II |
| BIO 193 General Bio. III | BIO 193 General Bio. III | BIO 193 General Bio. III | BIO 193 General Bio. III | BIO 193 General Bio. III | BIO 193 General Bio. III | BIO 193 General Bio. III |
| BIO 260 Genetics | BIO 260 Genetics | BIO 260 Genetics | BIO 260 Genetics | BIO 260 Genetics | BIO 260 Genetics | BIO 260 Genetics |
| BIO 206 Biostatistics | BIO 206 Biostatistics | BIO 206 Biostatistics | BIO 206 Biostatistics | BIO 206 Biostatistics | BIO 206 Biostatistics | BIO 206 Biostatistics |
| Required Concentration Courses (12 hours): | Required Concentration Courses (12 hours): | Required Concentration Courses (8 hours): | Required Concentration Courses (4 hours): | Required Concentration Courses (16 hours): | Required Concentration Courses (16 hours): | Required Concentration Courses (8 hours): |
| BIO 215 Ecology or BIO 235 Evolution | BIO 210 Microbiology | BIO 215 Ecology | BIO 250 Cell Biology | BIO 210 Microbiology | BIO 250 Cell Biology | BIO 250 Cell Biology |
| BIO 250 Cell Biology | BIO 250 Cell Biology | BIO 325 Evolution | | BIO 220 Prin. Of Biotechnology | BIO 339 Cellular Neurobiology | BIO 307 Animal Phys. or BIO 308 Human Phys. |
| BIO 307 Animal Phys. or BIO 308 Human Phys. | BIO 360 Molecular Biology | | | BIO 250 Cell Biology | BIO 307 Animal Phys. or BIO 308 Human Phys. | BIO 309 Plant Physiology |
| BIO 309 Plant Physiology | | | | BIO 349 Topics/Microbio. & Biotech. | BIO 340 Behavioral Neuroscience | |
| | | | | | | |
| Five Additional Major Level Courses (20 hours): | One Advanced Topics Course (4 hours): | Three Upper Level Courses From | Two Courses From Approved List (8 hours): | Two Course From Approved List (8 hours). | One Course From Approved List (4 hours): | Three Upper Level Courses From |
| Any five of approved Biology courses. | BIO 315 Topics in Ecology | Approved List. One Must Be A Lab. | BIO 201 Human Anatomy | One Must Be A Lab. | BIO 341 Topics in Neurobiology | Approved List (12 hours). One Must Be A Lab. |
| Two must have labs and two must be | BIO 319 Topics in Behavioral Parasitology | BIO 270 Comparative Vert Anatomy | BIO 210 Microbiology | BIO 235 Evolution | BIO 342 Cognitive Neuroscience | BIO 201 Human Anatomy or BIO 270 |
| at least 300-level. | BIO 335 Concepts in Evolution | BIO 301 Animal Behavior | CHE 340/341 BioChem & Exp BioCh | BIO 320 Advanced Microbiology | BIO 360 Molecular Biology | Comparative Vertebrate Anatomy |
| Open Electives to meet 192 hours. | BIO 341 Topics in Neurobiology | BIO 304 Field Methods for Biologists | BIO 307 Animal Phys. or BIO 308 Human Phys. | BIO 321 Molecular Methods/Eco/Evo | BIO 375 Intro to Pharmacology | BIO 307 Animal Phys. or BIO 308 Human Phys. |
| | BIO 345 Topics in Paleobiology | BIO 306 Research Methods & Applied Biostats | CHE 342/343 BioChem II | BIO 347 Topics/Med. Bacteriology | BIO 386 Intro to Endocrinology | BIO 309 Plant Physiology |
| | BIO 349 Topics in Microbiology & Biotech | BIO 315 Topics in Ecology | Three Upper Level Courses From | BIO 348 The Biology of Infection | Three Upper Level Biology Courses (12 hours). | BIO 312 Topics in Exercise Physiology |
| | BIO 347 Topics in Medical Bacteriology | BIO 318 Field Studies in Marine Biology | Approved List (12 hours). One Must Be A Lab. | BIO 360 Molecular Biology | 2/4 BIO Electives Must Be A Lab. | BIO 339 Cellular Neurobiology |
| | BIO 361 Topics in Molecular Biology | BIO 319 Topics in Behavioral Parasitology | BIO 201 Human Anatomy | BIO 362 Bioinformatics/Bench Sci. | | BIO 352 Advanced Comp. Physiology |
| | BIO 390 Special Topics (as appropriate) | BIO 321 Molec. Methods in Eco & Evo | BIO 210 Microbiology | BIO 370 Immunobiology | | BIO 360 Molecular Biology |
| | Two Upper Level Electives From Approved | BIO 325 Paleobiology | BIO 220 Prin. Of Biotechnology | BIO 375 Intro to Pharmacology | | BIO 385 Mammalian Reproduction |
| | List (8 hours). One Must Be A Lab. | BIO 332 Population Ecology | BIO 270 Compar. Vert. Anatomy | CHE 340/341 Biochemistry I | | BIO 386 Intro to Endocrinology |
| | BIO 309 Plant Physiology | BIO 335 Concepts in Evolution | BIO 307 Animal Phys. or BIO 308 Human Phys. | CHE 342/343 Biochemistry II | | CHE 340/341 Biochemistry I |
| | BIO 315 Topics in Ecology | BIO 345 Topics in Paelobiology | BIO 311 Histology | HLTH 320 Molecular Virology | | Three Upper Level Biology Courses (12 hours). |
| | BIO 321 Molecular Methods in Eco & Evo | BIO 389 Research in Field Biology | BIO 330 Developmental Biology | BIO 390 Special Topics | | One Must Be A Lab. |
| | BIO 330 Developmental Biology | BIO 390 Special Topics | BIO 339 Cellular Biology | Two Additional Major Level Courses (8 hours). | | |
| | BIO 335 Concepts in Evolution | Three Additional Majors-Level Courses (12 hours.) | BIO 340 Behavioral Neuroscience | | | |
| | BIO 339 Cellular Neurobiology | Two of the six total electives must have a lab. | BIO 341 Topics in Neurobiology | | | |
| | BIO 341 Topics in Neurobiology | | BIO 342 Cognitive Neuroscience | | | |
| | BIO 345 Topics in Paleobiology | | BIO 347 Topics/Med. Bacteriology | | | |
| | BIO 347 Topics in Medical Bacteriology | | BIO 348 The Biology Of Infection | | | |
| | BIO 348 The Biology of Infection | | BIO 349 Topics/Microbio. & Biotech. | | | |
| | BIO 355 Genetic Toxicology | | BIO 352 Advanced Comp. Physiol. | | Summary of Biological Sci | ences Major Requirements |
| | BIO 361 Topics in Molecular Biology | | BIO 360 Molecular Biology | | All BIO course requirements total 52 credit hours. | |
| | BIO 362 Bioinformatics/Bench Sci. | | BIO 362 Bioinformatics/Bench Sci. | | BIO students will also take | |
| | BIO 365 Principles of Toxicology | | BIO 370 Immunobiology | | Physics Sequence (12 hours) | |
| | BIO 370 Immunobiology | | BIO 375 Intro to Pharmacology | | General Chemistry Sequence (12+ hours) | |
| | BIO 375 Intro to Pharmacology | | BIO 380 Cancer Biology | | Organic Chemistry Sequence (12 hours) Org I, II, a | and III, or Org I, II, and CHE 346 |
| | BIO 380 Cancer Biology | | BIO 381 Topics in Cancer | | Calculus Sequence (8+ hours) | |
| | BIO 381 Topics in Cancer | | BIO 385 Mammalian Reproduction | | Liberal Studies Requirements (76 hours) | |
| | BIO 385/485 Mammalian Reproduction | | BIO 386 Intro to Endocrinology | | Open Electives (20 hours; as needed to reach 192) | |
| | BIO 386 Intro to Endocrinology | | CHE 340/341 Biochemistry I | | Total: 192 hours | |
| | CHE 340/341 Biochemistry I | | CHE 342/343 Biochemistry II | | | |
| | BIO 390 Special Topics | | BIO 390 Special Topics | | | |
| | Two Additional Major Level Courses (8 hours): | | Two Additional Major Level Courses (8 hours): | | | |
| | Any two approved Biology courses. | | Any two approved Biology courses. | | | |
| | One must be a lab course. | | One must be a lab course. | | | |
| | | | | | | |
| At least two of the five electives must have a lab | | | Students may substitute HLTH 301 AND HLTH | | | |
| component and at least two of the five must be | At least two of the four biology electives | Two of the six total electives must have a lab. | 302 for BIO 201 AND BIO 307 or BIO 201 AND BIO | One elective must be a lab course. Biology | At least two of the four total electives must be | One elective must be a lab course. Biology |
| 300-level courses. Biology courses that fulfill the | the General Biology sequence that have any | sequence that have any Scientific Inquiry domain | 308. Students who opt to take HLTH 301 AND | sequence that have any Scientific Inquiry | General Biology sequence that have any | sequence that have any Scientific Inquiny |
| Scientific Inquiry Domain requirements, other | Scientific Inquiry domain designation do not | designation do not generate credit toward the | following courses: BIO 201, BIO 307, and BIO 308. | domain designation do not generate credit | Scientific Inquiry domain designation do not | domain designation do not generate credit |
| generate credit toward the maior or minor. | generate credit toward the major or minor. | major or minor. | BIO 201 and 307 or BIO 308 do not need to be | toward the major or minor. | generate credit toward the major or minor. | toward the major or minor. |
| · · · · · · · · · · · · · · · · · · · | | | taken as a combination. | | | |
| 1. Students can request permission from the depart | 1. Students can request permission from the department to have a BIO 390 class count for one of the requirements if appropriate. | | | | | |
| Lit is strongly recommended that students who wish to take the MCAT take an ethic scurse as part of their Philosophical and PSY 105, PSY 106 & SOC 101 for their Social. Cultural, and Behavioral Inquiry. Biology courses other than the General Biology sequence that have any Scientific Innuiry domain designation do not generate credit toward | | | | | | |
| he major or minor. | | | | | | |

Getting Started...

Declaring or Changing Your Major, Minor, or Concentration

You can officially register or change your intended major, minor, or concentration in Campus Connect. This can be done by the following method: Campus Connect >NavBar:Navigator>Navigator>Self Service > Academic Planning > Change College, Major, Minor, or Concentration

Textbooks & I-Clickers

You can locate, buy and rent the textbooks you need through the DePaul Bookstore's Website or visit in person. You can also check at the DePaul library, or the library's Textbook I-sharing program, to see if books are available there to rent out, free of charge. I-Clickers are needed for the General Biology sequence, as well as some of the upper level biology courses, so do not get rid of them!

Registering & Wait list Procedures

Follow this link for information on registering for classes. (https://offices.depaul.edu/depaul-central/registration/Pages/add-dropswap.aspx) Also, please understand waitlists are automatic within our system. If you are on the waitlist for a class, you will need to wait until the appropriate amount of people drop from the class to which then our system will automatically add you to the class from the waitlist. There is little to nothing your advisor or the professor can do to get you into a class you are waitlisted for, especially lab based classes. This is due to space and safety issues.

Pre-Health Advising

Interested in a health related career? There are many forms of Pre-Health Advising at DePaul. There is the Pre-health Advising Committee (PAC), which is comprised of an interdisciplinary body of faculty and staff whose primary function is the academic advising of students intending to pursue a career in one of the health professions. We also have a dedicated Pre-Health staff advisor in addition to the Biology staff advisor. To learn more about the PAC and our Pre-Health Advisor, Lindsey Burdick (lburdick@depaul.edu), and to obtain information about upcoming events and speakers that the PAC organizes, we encourage you to visit their website and register for their services at: http://csh.depaul.edu/student-resources/advising-student-services/pre-health-advising

Getting Involved... Student Groups

There are many science student groups available for students wishing to get involved in leadership opportunities on campus: Please visit the Student Involvement website OrgSync to join and to learn more about all of the below student organizations: <u>http://studentaffairs.depaul.edu/involvement</u>.

- Pre-Dental Club: <u>depaulpredental@gmail.com</u>
- Pre-Vet Club: <u>depaul.prevetclub@gmail.com</u>
- DePaul Neuroscience Club: <u>depaulneuro@gmail.com</u>
- DeSACNAS: <u>desacnas@gmail.com</u>
- DePaul Ecology, Evolution, & Physiology (DEEP): <u>deep.depaul@gmail.com</u>
- Red Cross Club: <u>depaulredcrossclub@gmail.com</u>
- Global Brigades: <u>depaulgbpresidents@gmail.com</u>
- O-STEM: <u>depaulostem@gmail.com</u>

Research Opportunities

Faculty within the Biological Sciences Department often have positions available for undergraduates seeking research experience. We encourage students to contact faculty and explore the opportunity for research here at DePaul:

- Visit our website and read through faculty profiles to see the current research projects of our faculty members: <u>https://csh.depaul.edu/academics/biological-sciences/Pages/faculty-staff.aspx</u>
- This link lists out some of the internal and external opportunities we have: <u>http://go.depaul.edu/cshstudentresearch</u>
- Handshake is our online hub for all things college to career jobs, internships, career fairs, events, mentors and more. Goal in mind: to help connect students to their dream career: <u>https://depaul.joinhandshake.com/</u>
- If you land a research opportunity, be sure to check with your advisor to see how the research could apply to your experiential learning requirement.

Transferring Credits at DePaul University

Transfer Students

We are aware that many of our Biology students have transferred in credits from other colleges and universities. Many have transferred from majors other than Biology. Because the number and type of courses transferred varies considerably, **we strongly urge transfer students to see your staff academic advisor (Jaimie Engle, jengle@depaul.edu) as soon as possible**. We want to make sure you are on track to take the proper courses and to establish an appropriate timeline for graduating from the program.

Students transferring from another major, or from backgrounds with little or no science coursework, should realize it might take longer to complete the degree than expected due to the required sequencing of courses. In talking with your advisor, make sure you both understand and are comfortable with any outlined timeline for completion of the Biology program. Especially if transferring any of your required science or math sequences from a semester-system institution, keep in mind these do not match up perfectly with DePaul's quarter-system sequences. For example, if you transferred in Biology 121 from Harold Washington College, it would cover all of BIO 191 at DePaul and part of the content covered in BIO 192 at DePaul. But you would still have to take BIO 192 at DePaul before you could finish the sequence with BIO 193. You would have to take both BIO 121 and 122 at Harold Washington to cover BIO 191, 192, and 193 at DePaul.

Transferring Courses into DePaul

As a DePaul student, if you are considering taking a course outside of the university and transferring in the credits, you should be aware of the policies and guidelines regarding transfer credit. (<u>https://csh.depaul.edu/student-resources/advising-student-services/undergraduate-advising/Forms/Documents/SupplementalTransferCreditEditableForm80613.pdf</u>) Please be sure to read these policies carefully. **STUDENTS MUST FILL OUT THE TRANSFER CREDIT APPROVAL FORM PRIOR TO TAKING ANY COURSES AT AN OUTSIDE INSTITUTION.** The College of Science and Health will notify you if your request has been approved or denied.

The Transfer Course List tool is helpful in determining how transfer credit will be applied to a DePaul degree: https://www.depaul.edu/admission-and-aid/types-of-admission/transfer-student/transferring-your-courses/Pages/course-lists.aspx.

NOTE: Last 60 credits must be taken at DePaul University.

Be sure to see your advisor if you have questions about transferring credit into DePaul.

AP Credit from High School

Currently, students get academic credit for AP test scores as follows:

- Score of 3 = BIO 191 (an AP score of 3 is a weak score. Students should take BIO 191)
- Score of 4 = BIO 191 and 192
- Score of 5 = BIO 191, 192, and 193

Many professional school programs <u>do not</u> accept AP credit for science courses. Students who are considering applying to professional programs (e.g. medical, dental, pharmacy, optometry, etc.) should take BIO 191, 192, and 193 at DePaul. For a full list of accepted AP credit, visit this link: <u>https://www.depaul.edu/admission-and-aid/test-credit-and-placement/credit-given-by-exam/Pages/ap.aspx</u>. To clarify, DePaul <u>does</u> accept AP credit for eligible AP scores. Even if credit is not used to substitute for major coursework, the credit can still count toward graduation in the Open Electives requirement.

| 2019-2020 Biology Course Offerings by Quarter | | | | | |
|---|--|--|--|--|--|
| (NOTE: Only those courses offered consistently in specific quarters doesn't include less-frequently offered electives or allied field courses.) | | | | | |
| AUTUMN QUARTER | WINTER QUARTER | SPRING QUARTER | | | |
| BIO 191 General Biology I | BIO 191 General Biology I | BIO 192 General Biology II | | | |
| BIO 193 General Biology III | BIO 192 General Biology II | BIO 193 General Biology III | | | |
| BIO 206 Biostatistics** | BIO 206 Biostatistics** | BIO 201 Human Anatomy | | | |
| BIO 210 Microbiology | BIO 210 Microbiology | BIO 206 Biostatistics** | | | |
| BIO 215 Ecology | BIO 220 Prin. of Biotechnology | BIO 210 Microbiology | | | |
| BIO 235 Evolution | BIO 230 Epidemeology | BIO 215 Ecology | | | |
| BIO 250 Cell Biology | BIO 250 Cell Biology | BIO 250 Cell Biology | | | |
| BIO 307 Animal Physiology | BIO 260 Genetics | BIO 260 Genetics | | | |
| BIO 319/419 Topics in Behavioral Parasitology | HLTH 301 Integrative Human A&P A | HLTH 302 Integrative Human A&P B | | | |
| BIO 330/430 Developmental Biology | BIO 306/406 Research Methods & Appl. Biostats. | BIO 308 Human Physiology | | | |
| BIO 339/439 Cellular Neurobiology | BIO 309/409 Plant Physiology | BIO 311 Histology | | | |
| BIO 342/442 Cognitive Neuroscience | BIO 318 Field Marine Biology (Intersession) | BIO 335/435 Concepts in Evolution | | | |
| BIO 385/485 Mammalian Reproduction | BIO 340/440 Behavioral Neuroscience | BIO 340/440 Behavioral Neuroscience | | | |
| CHE 340/341 Biochemistry I | BIO 345/445 Topics in Paleobiology | BIO 342/442 Cognitive Neuroscience | | | |
| BIO 352/452 Advanced Comparative Physiology | BIO 360/460 Molecular Biology | BIO 349/449 Topics in Microbiology & Biotechnology | | | |
| LIBERAL STUDIES COURSES | BIO 370/470 Immunology | BIO 352/452 Advanced Comparative Physiology | | | |
| BIO 395 Captsone Seminar | CHE 340/341 Biochemistry I | BIO 380/480 Cancer Biology | | | |
| SI COURSES FOR NONSCIENCE MAJORS | CHE 342/343 Biochemistry II | LIBERAL STUDIES COURSES | | | |
| BIO 104 Evolution & Society | SI COURSES FOR NONSCIENCE MAJORS | BIO 395 Capstone Seminar | | | |
| BIO 105 The Science Behind Human Health | BIO 104 Evolution & Society | SI COURSES FOR NONSCIENCE MAJORS | | | |
| BIO 118 Marine Biology | BIO 105 The Science Behind Human Health | BIO 104 Evolution & Society | | | |
| BIO 122 Intro to Paleobiology | BIO 110 Evolution & Health | BIO 105 The Science Behind Human Health | | | |
| BIO 126 Brain & Behavior ^^ | BIO 155 Intro to Biology with Lab^ | BIO 126 Brain & Behavior^^ | | | |
| BIO 155 Intro to Biology with Lab ^ | | BIO 155 Intro to Biology with Lab^ | | | |
| | | | | | |
| *All course offerings are subject to change. Please se | ee your advisor to confirm how these courses will apply to | o your degree. | | | |
| **BIO 206 fulfills the statistics requirement, but is no | t applicable as a Biology elective for the BIO major or mi | nor. | | | |
| ^Students cannot receive credit for both BIO 115 and | | | | | |
| MStudents cannot receive credit for both BIO 126 and 162. | | | | | |
| 400-level indicates the graduate level section of each | course. | | | | |
| This list is not comprehensive but for the purpose of | | | | | |
| longterm planning, simply shows those Bio or Allied | | | | | |
| Field courses that are offered consistently in specific | | | | | |
| he applied to the degree that are not offered in a | | | | | |

Biology Minors

consistent pattern.

To earn a minor in Biology, students must take:

- BIO 191, 192, and 193
- Three courses designed for Biology majors (see page 11).
- Courses that will **not** apply to the Biology Minor:
 - SI courses that are designed for non-science majors (e.g. BIO 115, BIO 155, etc.)
 - BIO 206 Biostatistics, will not apply to the Biology minor. The selection of the three elective courses is up to the student and their academic advisor, based on their interests and career goals. Students are free to contact the Biology academic advisor, Jaimie Engle at jengle@depaul.edu on any questions or suggestions for courses they should take to fulfill the Biology minor requirements.

Supplemental Instruction and Tutoring for Biological Sciences Students

Supplemental Instruction (SI) lessons are a great way to review material learned in the classroom. Supplemental Instruction (SI) is a free program operating out of the Office for Teaching, Learning, and Assessment. Students who are enrolled in SI-supported courses are highly encouraged to attend peer-assisted review sessions led by SI Leaders. SI Leaders are students selected by the faculty to help review class material who successfully completed the course themselves. Sessions are typically held in the Richardson Library in Lincoln Park. For the SI Schedule, click here: https://resources.depaul.edu/supplemental-instruction/session-schedule/Pages/default.aspx

Students are also encouraged to attend their Teaching Assistant's office hours for assistance outside of class. One-on one tutoring is also available for science and math courses. Visit the Success website for more locations and hours: https://resources.depaul.edu/student-success/tutoring/Pages/default.aspx

Major Field Courses List: all pre-requisites must be passed with a C- or better

| 100 Level | Courses | | Pre Requisites | Notes |
|-----------|-------------|--|---|--|
| Lab | BIO 191 | General Biology I for Science Majors | MAT 130 | General Biology courses can also count as SI |
| Lab | BIO 192 | General Biology II for Science Majors | BIO 191 | General Biology courses can also count as SI |
| Lab | BIO 193 | General Biology III for Science Majors | BIO 192 | General Biology courses can also count as SI |
| Lab | BIO 201 | Human Anatomy | Sophomore standing | |
| 200 Level | Courses | ······································ | Pre Reguisites | Notes |
| | NEU 201 | Introduction to Neuroscience | BIO 191 | |
| | BIO 206 | Biostatistics | BIO 191/192/193 | Counts as statistics credit- will not apply as |
| | 510 200 | Diostationis | 5.0 151, 152, 155 | a Biology major or minor elective |
| Lah | BIO 209 | Plant Biology | BIO 191/192/193 | |
| Lab | BIO 205 | Microbiology | BIO 191/192/193 | |
| Lab | BIO 210 | Ecology | BIO 191/192/193 | |
| Lab | BIO 213 | Principles of Biotechnology | BIO 210 and BIO 250 | |
| Lau | BIO 220 | Epidemiology | BIO 210 and BIO 250 | |
| Lab | BIO 230 | Evolution | BIO 200 | |
| Lab | BIO 255 | Coll Biology | BIO 191/192/195 | |
| Lab | BIO 250 | Constiss | General BIO sequence and CHE 154 01 158 | |
| Lab | BIO 260 | Genetics | BIO 191/192/193 | |
| Lan | BIO 270 | | BIO 131/132/133 | Offered essesionally |
| 200 Laval | BIO 290 | Topics III Biology | Dro Dogwisitos | Netes |
| SUU Level | Courses | Animal Dahaviar | Fre Requisites | Notes |
| LdD | BIO 301 | Animal Benavior | Gen BIO Seq, BIO 206, and BIO 215 OF BIO 235 | |
| Lab | BIO 302 | Student Lab Instruction | Department consent required | Counts as experiential learning credit |
| | BIO 303 | Intro to Scientific Research | Experience in scientific research | Counts as experiential learning credit |
| Lab | HLIH 301 | Integrative Human Anatomy and Physiology A | BIO 193 and CHE 134 or 138 | |
| Lab | HLIH 302 | Integrative Human Anatomy and Physiology B | BIO 193 and CHE 134 or 138 | |
| Lab | BIO 304 | Field Methods for Biologists | Junior standing or above | |
| Lab | BIO 306 | Research Methods and Applied Biostatistics | BIO 206 | |
| Lab | BIO 307 | Animal Physiology | BIO 250 | Can't receive credit if already taken BIO 310 or 308 |
| Lab | BIO 308 | Human Physiology | BIO 250 | Can't receive credit if already taken BIO 310 or 307 |
| Lab | BIO 309 | Plant Physiology | BIO 250 | Cross-listed with BIO 409 |
| Lab | BIO 311 | Histology | BIO 250 | |
| | BIO 312 | Topics in Exercise Physiology | BIO 250 | Cross-listed with BIO 412 |
| | BIO 315 | Topics in Ecology | BIO 191/192/193 and BIO 215 | Cross-listed with BIO 415 |
| Lab | BIO 316 | Phycology | BIO 191/192/193 | Cross-listed with BIO 416 |
| Lab | BIO 317 | Aquatic Biology | BIO 191/192/193 and BIO 215 | Cross-listed with BIO 417 |
| Lab | BIO 318 | Field Studies in Marine and Estuarine Biology | BIO 191/192/193 and BIO 215 or 235 | |
| | BIO 319 | Topics in Behavioral Parasitology | BIO 191/192/193 and BIO 215 or 235 | Cross-listed with BIO 419 |
| Lab | BIO 320 | Advanced Microbiology | BIO 210 and junior standing | Cross-listed with BIO 420 |
| Lab | HLTH 320 | Molecular Virology | BIO 210 or BIO 250 | |
| Lab | BIO 321 | Molecular Methods in Ecology and Evolution | BIO 215 and BIO 235 | Cross-listed with BIO 421 |
| Lab | BIO 325 | Paleobiology | BIO 191/192/193 and BIO 215 or 335 | |
| Lab | BIO 330 | Developmental Biology | BIO 250 and BIO 260 | Cross-listed with BIO 430 |
| | BIO 331 | Topics in Developmental Biology | BIO 250 and BIO 260 | Cross-listed with BIO 431 |
| | BIO 332 | Population Ecology | BIO 215 or ENV 250 | |
| Lab | BIO 333 | Mycology | BIO 215, BIO 250, and BIO 260 | Cross-listed with BIO 433 |
| | BIO 335 | Concepts in Evolution | BIO 235 or 215 and BIO 260 | Cross-listed with BIO 435 |
| | BIO 339 | Cellular Neurobiology | BIO 250 or PSY 377 or HLTH 301 | Cross-listed with BIO 439 |
| Lab | BIO 340 | Behavioral Neuroscience | NEU 201, BIO 339, BIO 310, or PSY 377 | |
| Lab | CHE 340/341 | Biochemistry I | CHE 234/235 or CHE 238/239 | |
| Lab | CHE 342/343 | Biochemistry II | CHE 340/341 | |
| | BIO 341 | Topics in Neurobiology | BIO 340 or BIO 339 or PSY 377 | Cross-listed with BIO 441 |
| | BIO 342 | Cognitive Neuroscience | NEU 201 or BIO 339, 340, or 341, or PSY 377 | |
| | BIO 345 | Topics in Paleobiology | Gen BIO sequence and BIO 215 or 235 | Cross-listed with BIO 445 |
| [| CHE 346 | Principles of Biochemistry | CHE 232 or CHE 238 | |
| | BIO 347 | Topics in Medical Bacteriology | BIO 210 or 250 & Junior Standing | Cross-listed with BIO 447 |
| | BIO 348 | Biology of Infection | BIO 210 or BIO 220 | Cross-listed with BIO 448 |
| | BIO 349 | Topics in Microbiology and Biotechnology | BIO 210 or BIO 220 | |
| | BIO 352 | Advanced Comparative Physiology | BIO 307 or 308* | Cross-listed with BIO 452 |
| | BIO 354 | Cell Motility | BIO 250 and PHY 152 or 172 or 156, | Cross-listed with BIO 450 |
| | | · · · · · · | and MAT 149 or 162 or 172 | |
| Lab | BIO 355 | Genetic Toxicology | BIO 260 | Cross-listed with BIO 455 |
| Lab | BIO 360 | Molecular Biology | BIO 250 and BIO 260 | Cross-listed with BIO 460 |
| | BIO 361 | Topics in Molecular Biology | BIO 360 | Cross-listed with BIO 361 |
| <u> </u> | BIO 362 | Bioinformatics for Bench Scientists | Gen BIO sequence and Bio 260 | Cross-listed with BIO 462 |
| | BIO 365 | Principles of Toxicology | Gen BIO sequence and CHF 234 or 238 | Cross-listed with BIO 465 |
| Lab | BIO 370 | Immunology | BIO 260 | Cross-listed with BIO 405 |
| | BIO 375 | Introduction to Pharmacology | BIO 250 & BIO 307 or 308* | Cross-listed with BIO 475 |
| - | BIO 380 | Cancer Biology | BIO 250 and BIO 260 | Cross-listed with BIO 481 |
| <u> </u> | BIO 381 | Topics in Cancer Biology | BIO 250 | Cross-listed with BIO 481 |
| <u> </u> | BIO 385 | Mammalian Reproduction | BIO 250 & BIO 307 or 308* | Cross-listed with BIO 485 |
| | BIO 386 | Introduction to Endocrinology | BIO 250 & BIO 307 or 308* | Cross-listed with BIO 486 |
| | BIO 389 | Research in Field Biology | Instructor consent | |
| | BIO 300 | Special Tonics | lunior or senior standing | Offered occasionally |
| | BIO 300 | Independent Study | sumor or semon standing | Worked out through individual faculty |
| <u> </u> | *can sub- | stitute HITH 301 AND 302 for aither BIO 207 or 200 | I R Please note must complete both ULTH 201 AN | D 302 just one will not suffice |
| | cari Sub | STRATE HEITI JOT AND JOZ IOI EITHEI DIO 307 01 300 | A rease note must complete both nETH SULAN | a sor just one will not summe. |

Email Etiquette 101



NOTE: This page provides suggestions for professional email communication, but should not be confused as instructions for how to request an academic advising appointment within the Biological Sciences department. Instructions for scheduling/requesting a Biology Advising appointment can be found on page 2 of this guide.

THE SENIOR "TO DO" LIST FOR GRADUATION- 2019/2020



Congratulations on making it this far! The DePaul Commencement website will have all of the information you need to participate in the Commencement Ceremony. Keep in mind that you need to apply for degree conferral in order to receive your diploma. Visit the Commencement website here: <u>https://resources.depaul.edu/commencement/Pages/default.aspx</u> If you want to graduate in a timely manner, follow these steps:

- 1. **Meet with your Staff Academic Advisor, for your mandatory degree conferral appointment** to make sure you are on track to graduate. You can find your advisor assignment in BlueStar, and can schedule an appointment with them through their listed contact information.
- 2. All students must graduate with a minimum of 192 credit hours, at least a 2.0 cumulative GPA and have finished all the requirements for their degree. <u>https://www.depaul.edu/university-catalog/degree-requirements/undergraduate/csh/biological-sciences-bs/Pages/default.aspx</u>
- 3. Apply for Degree Conferral on Campus Connect. Submitting this application lets the university know that you plan to finish your degree in a specific term. You cannot obtain a degree from DePaul without applying for degree conferral (it is a really quick process). Follow this path in Campus Connect:
 "Main Menu" → "Self Service" → "Degree Process/Graduation" → "Apply for Graduation." Deadlines for applying for Degree Conferral:
 Fall Quarter (October 1st), Winter Quarter (January 15th), Spring Quarter (February 1st), Summer Session (July 15th)
- 4. Order your Cap and Gown in April. Ordering your cap and gown serves as your RSVP to the Commencement ceremony in June. Without a cap and gown order, you cannot participate. You will need a cap and gown in order to walk across the stage during the commencement ceremony. <u>https://resources.depaul.edu/commencement/preparation/Pages/cap-and-gown.aspx</u>
- 5. Pick up your Cap and Gown in the Lincoln Park Student Center room 120 A/B. Date/time TBA (usually in June). If you do not pick up your cap and gown (and tickets) during cap and gown pick-up. You will receive emails with information about cap and gown pick-up, but you should also check the Commencement website in the spring.
- 6. **Take out loans to finance school?** Schedule an appointment with an Advisor in our Financial Fitness Office to learn about loan consolidation and repayment plan options: <u>http://financialfitness.depaul.edu</u>.
- 7. **Need to make plans for after graduation?** Visit the Career Center and meet one-on-one with a career advisor: https://resources.depaul.edu/career-center/Pages/default.aspx

*For questions regarding resume building, writing a cover letter, and career opportunities, please make an appointment with a Career Center Advisor in Schmitt Academic Center room 192. The Career Center staff can also be reached by phone at (773) 325-7431 and by e-mail at career_center@depaul.edu.