

Winthrop University B.S. in Biology General Advising

INTRODUCTION

The B.S. in Biology program at Winthrop University offers students broad training in Biology. Students may choose concentrations in areas of biomedical research, conservation biology, medical technology, or obtain Teacher Certification in Secondary Education (<https://www.winthrop.edu/cas/biology/general-degree-information.aspx>). Small classes (averaging 20-24 students in labs) ensure that students have the opportunity to take advantage of interaction with their instructors. Students who major in Biology pursue careers in a variety of fields, such as medicine, dentistry, physical therapy, conservation, natural resource management, and medical technology. More detailed advising information for concentrations and these career paths can be found here (<https://www.winthrop.edu/cas/biology/>).

CURRICULUM

The Biology curriculum consists of general education requirements, major courses, and electives. All students must complete the program requirements as outlined in the Biology Degree Checklist and highlighted in the table below. You can find links to the checklists on this CAS page: <https://www.winthrop.edu/cas/student-services/degree-checklists.aspx>

BACHELOR OF SCIENCE IN BIOLOGY		
Requirement	Courses	Hours
Core Curriculum	BIOL 202, 220, 222 or 270, 221, 223 or 271, 300, 316 or 317, 480, 390, 490	20-23
Area A Ecology and Evolution	Select one course from BIOL 301, 302, 314, 323, 340, 403, 405, 407, 507, 513, 542, 551, 552A or B	3-4
Area B Cell and Molecular Biology	Select one course from BIOL 310, 311, 315, 321, 422, 517, 519, 522, 526, 528, 529, 532, 539, 555, 560	3-4
Area C Biodiversity and Organismal Biology	Select one course from BIOL 303, 304, 305, 306, 307, 308, 309, 505, 508, 510, 511, 518, 524, 525, 570	3-4
Additional course (A, B, or C)	Select one course from A, B, or C	3-4
Area D Biology Electives	Select additional courses to total 42 hours in BIOL from the above areas and from the following: BIOL 275, 371, 440, 450H, 460, 461, 463, 471, 472, 530, 540, 570	To total a minimum of 44hrs in BIOL
Math and Science Courses	CHEM 105, 108 (General Chem I & II)	6
	MATH 101, 105, 141, 150, 151, 201, 341, or any MATH course with 201 as the pre-requisite (the MATH course used to satisfy the Quantitative Skills Area may not be counted here)	3-4
Area E Mathematics and Science Electives	Must be chosen from: MATH 101, 105, 141, 150, 151, 201, 341, or any MATH course with 201 as the pre-requisite (the MATH course used to satisfy the Quantitative Skills Area may not be counted here); CHEM (any course above 199 except 461, 462, or 463); PHYS (except 101/102); GEOL; GEOG 305, 308, 320 or 501 (only one may be applied toward credit in the major) and QMTH 205, 206 (if MATH 141 not selected)	11

- No more than 3 semester hours of credit may be awarded toward a degree in biology for a student completing any combination of BIOL 461 and 463.
- Must select at least one 500-level BIOL course.

There is flexibility in course scheduling and many options to successfully completing degree requirements for graduation. Additionally, course availability may vary by semester, so **it's important for students to consult their advisors and programs of interest in order to plan their academic schedule.**

One potential roadmap for the first two years in the Biology program is listed below, along with general advising notes. The following is only one option of many successful schedules in the Biology program.

FRESHMAN YEAR

Fall (15 credits)	Spring (17 credits) ^A
ACAD 101 (1)	HMPX 102 (3)
WRIT 101 (3)	BIOL 221 (3) ^C
BIOL 202 (0) ^B	BIOL 223 or 271 (1) ^C
BIOL 220 (3) ^C	CHEM 105 (4) ^D
BIOL 222 or 270 (1) ^C	Quantitative Skills (3)
CHEM 104 (3) ^D	Global Perspectives (3) ^E
Constitution requirement (3) ^E	
PESH (1)	

SOPHOMORE YEAR

Fall (16 credits)	Spring (16-17 credits)
CRTW 201 (3)	BIOL 316 (3) or BIOL 317 (4)
BIOL 300 (4)	Social Science (3)
CHEM 108 (2)	Humanities and Arts (3) ^E
Social Science (3) ^E	Historical Perspectives (3) ^E
Foreign Language 101 (4) ^F	Foreign Language 102 (4) ^F

- Students may need to take at least 30 credits per year to maintain scholarships and financial aid (this depends on the individual student and they should meet with financial aid to discuss their specific requirements).
- Students should take BIOL 202 in the Fall semester of their Freshman year. This course is only offered in the Fall semester.
- Students can complete BIOL 220/222 and BIOL 221/223 in the order they prefer; there is no specific order to these courses, unless the student participates in the SEA-PHAGES program. Then the student needs to take BIOL 220/270 first.
- In order to register for CHEM 105, students need to either take CHEM 104 or meet certain SAT/ACT scores (listed online). Students wishing to transfer Chemistry credit from another institution need to take CHM 110 and 111 as a set in order to receive credit for CHEM 104, 105, and 108. CHM 110 or 111 alone will transfer as CHEM 104.
- The timing of general education courses is not set. The constitution requirement could be taken after a social science requirement, for example. Some courses can meet more than one requirement, for example, HIST 211 can be used to meet constitution and historical perspectives requirements.
- There is a language placement exam to determine which course the student should take in order to meet the foreign language requirement (must achieve 102-level proficiency).

General Graduation Notes

- 1) Students must complete three cultural events for every 20 hours completed at Winthrop.
- 2) Students must complete a minimum of 120 total credits for the Biology Degree, with a minimum of 44 credits in approved BIOL courses, and a minimum of 40 credits in courses above 299.

TRANSFER STUDENTS

Winthrop University works with rolling admissions, so students can apply any time of the year, and financial aid is offered to qualified transfer students. The evaluation of transfer credit is completed by the Student Services Office of each academic area and an official transcript will need to be sent to Winthrop for evaluation. Transfer students must earn at least 25% of the semester hours of course credits at Winthrop to complete an undergraduate degree (30 hours in the Biology program). The degree must include 40 hours above the 299 level. Transfer credit is not used in computing GPA at Winthrop, but it is included in determining eligibility for

academic honors and the LIFE Scholarship. Transfer students are required to attend three cultural events for every 20 hours needed to reach 120 hours. Additional information regarding transfer admissions and resources can be found here:

<https://www.winthrop.edu/admissions/transfer-admission-resource-page.aspx>.

MASTERS PROGRAMS

The M.S. in biology program at Winthrop University offers students broad training in biology. Students have a choice of paths including a 2-year traditional thesis-based option and a 2-year non-thesis option. Students interested in continuing on to a Ph.D. or a professional program typically pursue the thesis option, while the non-thesis option works well for full-time, working professionals who seek advancement in their field. An additional 1-year accelerated path to a MS in Biology allows current Winthrop undergraduate students to complete both the undergraduate degree in biology and the master's degree in five years. Additional information can be found here: <https://www.winthrop.edu/graduateschool/master-of-science-in-biology.aspx>.

ADDITIONAL OPPORTUNITIES

Health Professions Connection

Bench to Bedside (<https://www.winthrop.edu/cas/biology/bench-to-bedside-b2b.aspx>)

Undergraduate Research (<https://www.winthrop.edu/cas/biology/undergraduate-research-scholars.aspx>)

Internships (<https://www.winthrop.edu/cas/biology/internships.aspx>)

SEA-PHAGES (<https://www.winthrop.edu/cas/biology/sea-phages-2017.aspx>)

SEA-GENES

Tri-Beta Honors Society (<https://www.winthrop.edu/studentorgs/beta-beta-beta.aspx>)

FOR MORE INFORMATION

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