

# Biology Major: Zoology and Animal Physiology Concentration - Bachelor of Science (BS)

## Major requirements

(All colleges, excluding teacher certification programs)

39 credits (62-65 total credits including CHM and MTH requirements)

*Each student must have a minimum of three biology credits at the 400-level (excluding BIO 479 and BIO 499).*

Code	Title	Credits
<b>Core</b>		
BIO 105	General Biology	4
BIO 203	Organismal Biology	4
BIO 291	Advancing Biological Science	2
BIO 306	Genetics	4
BIO 307	Ecology	3
BIO 315	Cell Biology	4
or MIC 230	Fundamentals of Microbiology	
<b>Upper level zoology</b>		
Select three credits from the following:		3-4
BIO 321	Ornithology	
BIO 406	Parasitology	
BIO 414	Freshwater Invertebrate Zoology	
BIO 422	Ichthyology	
BIO 444	Entomology	
BIO 488	Mammalogy	
<b>Upper level animal physiology</b>		
Select four credits from the following:		4
BIO 401	Comparative Vertebrate Anatomy	
BIO 458	Comparative Animal Physiology	
<b>Electives</b>		
Select an additional 11 credits from the following: <sup>1</sup>		11
ARC 345	Zoarchaeology	
BIO 303	Vertebrate Form and Function	
BIO 315	Cell Biology	
BIO 321	Ornithology	
BIO 401	Comparative Vertebrate Anatomy	
BIO 406	Parasitology	
BIO 414	Freshwater Invertebrate Zoology	
BIO 415	Neuroethology	
BIO 421	Comparative Vertebrate Endocrinology	
BIO 422	Ichthyology	
BIO 444	Entomology	
BIO 429	Evolution	
BIO 458	Comparative Animal Physiology	
BIO 446	Animal Behavior	

BIO 450	Internship in Biology	
BIO 488	Mammalogy	
BIO 491	Capstone Seminar in Biology	
BIO 499	Independent Research <sup>1</sup>	
or MIC 499	Independent Research in Microbiology	
<b>Chemistry requirement</b>		
Select three semesters of chemistry, including:		15-18
CHM 103	General Chemistry I	
CHM 104	General Chemistry II	
And one of the following organic chemistry options:		
Option A (5 credits) <sup>2</sup>		
CHM 300	Fundamental Organic Chemistry	
& CHM 302	and Fundamental Organic Chemistry Laboratory	
Option B (7 Credits)		
CHM 303	Organic Chemistry Theory I	
& CHM 304	and Organic Chemistry Theory II	
& CHM 302	and Fundamental Organic Chemistry Laboratory	
Option C (8 credits)		
CHM 304	Organic Chemistry Theory II	
& CHM 303	and Organic Chemistry Theory I	
& CHM 305	and Organic Chemistry Laboratory	
<b>Math requirement</b>		
STAT 145	Elementary Statistics	4
or MTH 265	Mathematical Models in Biology	
MTH 150	College Algebra (or placement into MTH 151 or higher, prerequisite for CHM 103)	4
<b>Total Credits</b>		<b>62-65</b>

<sup>1</sup> Up to two credits of BIO 499 may be used as electives.

<sup>2</sup> This is the recommended option for most biology majors, but students should consult with their biology advisor before enrolling.

## Degree requirements

All students must complete the general education, college core, major/minor, and university degree requirements in order to qualify for a degree. The easiest way to track all of these requirements is to refer to the Advisement Report (AR) found in the Student Information System (WINGS) Student Center. All enrolled students have access to the AR.

- General education (<https://catalog.uwlax.edu/undergraduate/generaleducation/>)
- College core (p. 1)
- Baccalaureate degree requirements (p. 2)

## College of Science and Health (CSH) Bachelor of Science core requirements

B.S. and B.A. students graduating from the College of Science & Health are required to take:

- two MTH/STAT courses or one MTH/STAT course and one CS course from the General Education: Quantitative Reasoning Category (GEN ED 1004); and
- two courses selected from the General Education: Experiential Science Category (GEN ED 1008) and/or from BIO 203, BIO 304, BIO 210, CHM 104, GEO 221, GEO 222, PHY 104 or PHY 204.

One of the two courses must be from a department outside of the student's major department.

**Notes:** Mathematics courses can be pairs, i.e. MTH 150 and MTH 151.

**For the Bachelor of Science degree**, in addition to all other College of Science and Health core requirements, students from non-exempted programs<sup>1</sup> must complete one of the following options. It is recommended that courses are selected in consultation with students' academic advisor.

1. Complete a second major; or
2. Complete a minor outside the major; or
3. Complete two certificates outside the major with at least 12 combined credits at the 300/400 level; or
4. Complete an individualized option, consisting of 18 credits
  - a. At least 12 credits must be earned at the 300/400 level outside the major department.
  - b. The remaining six credits should come from
    - i. 100 level or higher courses outside the major (General education courses may apply provided they are not being used to fulfill minimum general education requirements.); or
    - ii. 300/400 level courses inside major not being used to fulfill major requirements.
  - c. Internship credits may not count toward the individualized option.

<sup>1</sup> The list of exempted CSH programs is below.

## Baccalaureate degree requirements

Candidates for the Bachelor of Arts or the Bachelor of Science degrees must accomplish the following:

1. Fulfill the general education requirements.
2. Complete at least one ethnic studies (diversity) course.
3. Complete the courses prescribed by the Undergraduate Curriculum Committee for the degree desired in the respective school or college.
4. Earn a minimum of 120 semester credits with at least a 2.00 cumulative GPA.<sup>1,2</sup>
5. At least 40 credits must be earned in 300/400 level courses. Transfer courses earned or transferred at the 300/400 level apply to this requirement.
6. Complete major and minor requirements with at least a 2.00 GPA<sup>1,2</sup> in each major and minor (and concentration or emphasis, if selected).
7. A minimum of 30 semester credits in residence at UWL is required for graduation. (See undergraduate resident requirement (<https://catalog.uwlax.edu/undergraduate/academicpolicies/graduation/#undergraduate-residence-requirement>)).
8. Submit an application for graduation via the "Submit Intent to Graduate" link in the WINGS Student Center as soon as the student has registered for his or her final semester or summer term in residence. December and winter intersession graduates should

apply by May 1. May and summer graduates should apply by December 1.

- <sup>1</sup> Grade point average requirements for some programs will be considerably higher than 2.00. Re-entering students may be required to earn credits in excess of the 120 needed for graduation in any curriculum in order to replace credits earned in courses in which the content has changed substantially in recent years. Each case will be judged on its own merit.
- <sup>2</sup> The grade point average recorded at the time the degree is awarded will not be affected by future enrollment.

**No degree will be awarded unless all requirements are fulfilled and recorded within 30 days after the official ending date of each term.**

## Sample degree plan

Below is a sample degree plan that can be used as a guide to identify courses required to fulfill the major and other requirements needed for degree completion. A student's actual degree plan may differ depending on the course of study selected (second major, minor, etc.). Also, this sample plan assumes readiness for each course and/or major plan, and some courses may not be offered every term. Review the course descriptions or the class timetable (<http://www.uwlax.edu/records/regISTRATION/>) for course offering information.

The sample degree plans represented in this catalog are intended for first-year students entering UWL in the fall term. Students should use the Advisement Report (AR) in WINGS (<https://wings.uwlax.edu>) and work closely with their faculty advisor(s) and college dean's office to ensure declaration and completion of all requirements in a timely manner.

### General Education Program

The general education curriculum (Gen Ed) is the common educational experience for all undergraduates at UWL. Sample degree plans include Gen Ed placeholders to ensure completion of the general education requirements. Courses may be rearranged to fit the needs or recommendations of the student's program of study. Gen Ed courses may be taken during winter term (January between the semesters) and summer to reduce the course load during regular terms (fall and spring). Students should consult with their advisor and/or the college academic services director in their college/school for assistance with course and schedule planning. Refer to the general education requirements (<https://catalog.uwlax.edu/undergraduate/generaleducation/>) for more specific details.

At least 40 credits of the 120 credits required must be earned at the 300/400-level.

**Note:** New students and transfer students with less than 12 credits earned are required to take FYS 100 First-Year Seminar (3 cr.) during one of their first two semesters at UWL.

*This sample degree plan does not establish a contractual agreement. It identifies the minimum requirements a student must successfully complete, to qualify for a degree, in a format intended to assist the student in planning their academic career. Actual degree plans may differ.*

Year 1		
Fall	Credits Spring	Credits
BIO 105 (Gen Ed 1008 Experiential Science)	4 BIO 203	4
MTH 150 (Gen Ed 1004 Quantitative Reasoning)	4 CHM 103 (CSH Core - Gen Ed Experiential Science not BIO)	5

CST 110 (Gen Ed 1003 Spoken Literacy)	3 ENG 110 (Gen Ed 1002 Written Literacy)	3
FYS 100 (Gen Ed 1001 First-Year Seminar)	3 Gen Ed 1009 Social and Behavioral Studies	3
<b>14</b>		<b>15</b>

**Year 2**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
BIO 291	2 BIO 306	4
BIO 307	3 CHM 300	4
CHM 104	5 CHM 302	1
STAT 145	4 Gen Ed 1012 Planet That Sustains Us	3
Gen Ed 1007 Arts and Aesthetics	2 Gen Ed 1005 Ethnic Diversity	3
<b>16</b>		<b>15</b>

**Year 3**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
BIO 315 or MIC 230	4 BIO 401 or 458	4
Zoology Course (see list)	3 BIO Elective (see list)	3
BIO Elective (see list)	3 Gen Ed 1010 Stories We Tell	3
Gen Ed 1006 Mind and Body	3 CSH Core (300/400 not BIO) or Minor	3
CSH Core (300/400 not BIO) or Minor	3 University Elective	3
<b>16</b>		<b>16</b>

**Year 4**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
BIO Elective (see list)	3 BIO Elective (see list)	2
Gen Ed 1007 Arts and Aesthetics	2 Gen Ed 1013 Cultures of Our World	3
Gen Ed 1011 Past That Define Us	3 CSH Core or Minor <sup>1</sup>	3
CSH Core (300/400 not BIO) or Minor	3 University Elective	3
CSH Core or Minor <sup>1</sup>	3 University Elective	3
<b>14</b>		<b>14</b>

**Total Credits: 120**

<sup>1</sup> See CSH BS Core Requirements (<https://catalog.uwlax.edu/undergraduate/scienceandhealth/#Core>) for information on completing the individualized option. 300/400 requirements for graduation may be impacted.