

# Biology: Aquatic Science Concentration - Master of Science

## Program requirements

### Biology graduate student requirements

All graduate students in biology must meet the following requirements:

1. Complete at least 30 credits of graduate level course work (500-level and above) of which at least 15 credits must be at the 700-level.
2. Prior to registration each semester, the student must consult with the major advisor.
3. Enroll in BIO 700 Biology Graduate Program Orientation during the first fall semester of residence. Enroll in BIO 701 Communication in the Biological Sciences and two semesters of BIO 751 Graduate Seminar during the first four semesters of residence. Nurse anesthesia students are exempt from the BIO 700 and BIO 751 requirement but are required to complete BIO 701.
4. Students may complete an appropriate graduate course (numbers 500 and above) from outside the department of biology upon approval of a student's advisory committee.
5. Submit a written thesis or seminar paper proposal to the advisory committee (ideally prior to the beginning of the second year of residence). Nurse anesthesia students are exempt from this requirement and are not required to complete a thesis or seminar paper as part of the degree program.
6. Pass a thesis proposal defense and/or an oral examination covering material determined by the advisory committee, such as the student's research area and advanced course work.
7. Not less than one semester after completion of the thesis proposal/oral examination, present an oral defense of the thesis or seminar paper. Nurse anesthesia students are exempt from this requirement.
8. Students must maintain continuous term-to-term enrollment per the university's Graduate Research, Comprehensive Exams, and Terminal Project Completion Policy (<http://catalog.uwlax.edu/graduate/academicpolicies/registrationschedules/#continuous-registration>).
9. Consult this catalog and the department's graduate student guidelines for additional policies pertaining to graduate students in a biology program.

### Master of Science in biology: aquatic science concentration requirements:

Students in this concentration must satisfy both the program requirements above and the university's degree requirements for graduate students. In addition, when completing the program requirements above,

1. The research thesis must be in an area of aquatic science, and
2. At least 15 of the 30 credits must be from the following list; remaining credits are to be selected by the student and the advisory committee.

Code	Title	Credits
BIO 501	Comparative Vertebrate Anatomy	4
BIO 504	Plant Taxonomy	3

BIO 505	Aquatic and Wetland Vascular Plants	2
BIO 506	Parasitology	4
BIO 512	Mycology	4
BIO 514	Freshwater Invertebrate Zoology	3
BIO 519	Quantitative Methods in Ecology	3
BIO 522	Ichthyology	3
BIO 529	Evolution	3
BIO 541	Environmental Toxicology	3
BIO 544	Entomology	4
BIO 546	Animal Behavior	3
BIO 547	Standard Methods/Quality Assurance Water Analyses	3
BIO 558	Comparative Animal Physiology	4
BIO 564	Stream and Watershed Ecology	3
BIO 573	Marine Biology	3
BIO 576	Ecosystem Ecology	3
BIO 583	Cell Signaling	3
BIO 799	Research: Master's Thesis	1-6
GEO 505	Geographic Information System and Science II	3
GEO 510	Geospatial Field Methods	3
GEO 512	Geospatial Applications of Unmanned Aerial Systems	3
GEO 515	Remote Sensing of the Environment I	3
GEO 527	Sustainable Water Resource Management	3
GEO 528	Past Environmental Change	3
GEO 530	River Systems	3
GEO 545	Remote Sensing of the Environment II	3
GEO 585	Geographic Information System and Science III	3
GEO 588	Quantitative Methods in Geography	3
MIC 534	Aquatic Microbial Ecology	3
MIC 730	Biodegradation and Bioremediation of Environmental Contaminants	2
STAT 505	Statistical Methods	3
STAT 545	Correlation and Regression Analysis	3
STAT 546	Analysis of Variance and Design of Experiments	3
STAT 547	Nonparametric Statistics	3
STAT 549	Applied Multivariate Statistics	3

Total credits: 30

With the approval of the student's advisory committee, other courses may be substituted for those listed.

## University requirements

### University graduate degree requirements

After being admitted to the program of one's choice, candidates for a graduate degree must:

1. Complete any preliminary course work and deficiencies.
2. Complete all courses and other program requirements, including residence requirements prescribed for the degree desired in the respective school or college within a seven-year period from the date of initial enrollment, with the exception of students enrolled in the Student Affairs Administration and Leadership Ed.D. (SAA Ed.D.) graduate program. SAA Ed.D. students must complete all degree requirements within ten years from the time of initial enrollment in the graduate program.

3. Earn a minimum of 30 credits for a master's degree; 54 credits for a doctorate or post-master's degree. Earn at least one-half of the minimum number of credits required in the program in graduate-only level courses (700, 800, 900, and non-slash 600 level courses). Some UWL graduate programs require more than 30 graduate credits. Please review the individual program requirements (<http://catalog.uwlax.edu/graduate/programrequirements/>) listed in the catalog for the exact number of credits required.
4. Earn a cumulative grade point average of at least 3.00.
5. Satisfy dissertation, thesis, seminar paper, terminal/graduate projects and internships, or comprehensive examination, where applicable. A dissertation or thesis approved by the committee must be submitted to Graduate & Extended Learning for editorial review and approval by the Dean of Graduate & Extended Learning. The recommended initial submission date for review is two weeks before commencement. Ordinarily, a seminar paper or project report does not have to be approved by the Dean of Graduate & Extended Learning. However, if the seminar paper or project report is to be archived in Murphy Library, the student must follow the same rules as they apply to the dissertation/thesis requiring approval from the Dean of Graduate & Extended Learning. For further research/dissertation/thesis guidelines (<https://www.uwlax.edu/gel/graduate-education/thesis-and-dissertation/>), see Graduate & Extended Learning.
6. File a completed "Intent to Graduate" form online via the WINGS Student Center immediately following registration for the final semester or summer term in residence. December graduates and winter intersession should file by May 1. May and summer graduates should file by December 1.
7. Pay the graduation fee and remove all other indebtedness to the university. Payment of graduation fees does not imply readiness for graduation and does not take the place of applying for graduation.
8. Complete all requirements within 30 days after the official ending date of a term in order for a degree to be awarded for that term. (See #5 above for separate deadline for written capstone experience.)