Master of Science in Biological Sciences

The graduate program in biological sciences offers a research program of study leading to a Master of Science. The MS program requires a thesis that is the result of research performed under the supervision of a UAA faculty member.

We recommend that prospective students review the program guidelines and expectations, which are detailed in the D (http://www.uaa.alaska.edu/biological-sciences/master-of-science/_documentsanddates.cfm) department’s Graduate Handbook (https://www.uaa.alaska.edu/academics/college-of-arts-and-sciences/departments/biological-sciences/academic-programs/master-of-science/_documents/grad-handbook.pdf). General guidelines for prospective students can also be found on UAA’s Graduate School webpage (http://www.uaa.alaska.edu/graduateschool/prospective).

Admission Requirements

Satisfy the Admission Requirements for Graduate Degrees (http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/graduate). Students seeking admission into the MS in Biological Sciences program should also meet the following requirements. Details on this process are available on the department's website (http://www.uaa.alaska.edu/biological-sciences/).

1. Students must have a bachelor’s degree in biology, chemistry or equivalent science to be determined by the Graduate Affairs Committee.
2. Applicants must take the general Graduate Record Examination (GRE). Applicants are encouraged to take the subject (biology, biochemistry or chemistry) exam, but this is not required.
3. Applicants must have at least a 3.00 GPA, or at least a 70th percentile in two out of the six possible GRE scores (verbal reasoning, quantitative reasoning, analytical writing, and the three subtests of the subject GRE). Successful applicants ordinarily have no grade lower than a C in undergraduate science courses.

Required Documents for Admission

1. Official scores from the GRE must be requested by the student and sent directly by the testing agency to the university. Scores must be received prior to admission to the program.
2. A brief (typically one page) statement of the applicant’s research and career goals.
3. Three letters of recommendation from persons who are qualified to evaluate the applicant’s ability to successfully perform graduate-level coursework and research should be submitted directly to the department.
4. A letter of support from a UAA faculty member from the Department of Biological Sciences expressing willingness to accept the applicant into his/her research group and a statement of available funding or funding opportunities for research support for the student. Because students will not be admitted to the program without a faculty mentor from the department, prospective graduate students are strongly advised to contact faculty for research/advisor arrangements at an early stage of their admission process. Faculty research interests are available on the department website (http://www.uaa.alaska.edu/biological-sciences/faculty-and-staff/tenuretrackfaculty.cfm).

Applicants should also submit unofficial copies of items 1-4 to the department. Questions about this process should be directed to the departmental secretary at (907)-786-4770.

Mailing address:
Department of Biological Sciences Graduate Program
3101 Science Circle, CPSB 101N
Anchorage, AK 99508

Admission deadlines

All materials are due by March 1 for fall admission and by November 1 for spring admission. Acceptance is determined by the Graduate Affairs Committee and is based on the prospective student’s overall credentials and the availability of appropriate faculty for student research interests. Files received after these deadlines will be considered on a case-by-case basis for admission the subsequent semester.

Graduation Requirements

- Satisfy the General University Requirements for Graduate Degrees (http://catalog.uaa.alaska.edu/graduateprograms/degreerequirements).
- Complete 30 credits of coursework approved in advance by the student’s graduate study committee.
- Satisfactorily complete thesis research approved in advance by the student’s graduate study committee and pass an oral thesis defense.
- Submit a written graduate thesis that has been approved by the graduate study committee, departmental director, and deans of the College of Arts and Sciences and the Graduate School.
- Complete the program requirements below.

Program Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>600-level science electives (does not include BIOL A692, BIOL A696, BIOL A698 or BIOL A699 credits)</td>
<td>9</td>
<td></td>
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<tr>
<td>BIOL A601</td>
<td>Experimental Design and Statistics</td>
<td>3</td>
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<tr>
<td>or BIOL A604</td>
<td>Experimental Design for Cell/Molecular Biologists</td>
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<tr>
<td>BIOL A605</td>
<td>Graduate Proseminar in Sciences</td>
<td>3</td>
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<tr>
<td>BIOL A606</td>
<td>Advanced Analysis and Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>BIOL A698</td>
<td>Directed Research **</td>
<td>1</td>
</tr>
<tr>
<td>BIOL A699</td>
<td>Thesis **</td>
<td>1</td>
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* This requirement can be waived by the student’s graduate study committee if the student has sufficient other experience or coursework in statistical analysis.
In combined total, no more than 12 credits of BIOL A698 and BIOL A699 can count toward the 30 credits required for graduation; however more can be taken.

In order to receive credit for coursework, students must receive a minimum grade of B in all 400-level courses, and a minimum grade of C in all 600-level courses, provided that the cumulative GPA does not drop below 3.00.

**Additional requirements**

1. Within the first semester of study, each student must select a graduate study committee consisting of a minimum of three members (no more than five is recommended). Two of the three members must be full-time, tenure-track faculty in the Department of Biological Sciences. The committee chair will be the student’s primary research advisor if that person is a full-time UAA faculty member in the Department of Biological Sciences. If the primary research advisor is an affiliate faculty member, the chair will be shared with a full-time UAA faculty member from the Department of Biological Sciences, and both will be designated as co-chairs. To be a co-chair, a non-UAA faculty member must have official affiliate status within the department.

2. A student’s graduate study committee must meet at least once each year to review a student’s progress. The annual report on student progress (available online from the Graduate School) must be completed by the student and committee, signed by the graduate study committee, filed with the departmental secretary, and submitted to the UAA Graduate School no later than September 15 of each year. Failure to file annual progress reports will be taken as an indication of inadequate progress, and is grounds for probation and subsequent dismissal from the program.

3. Each student must submit an official GSP form by the end of the first semester of graduate work. The GSP formally establishes the specific program requirements that will, upon satisfactory completion, entitle the student to receive the graduate degree or certificate. This form must be approved by the student’s graduate study committee and also be signed by the department director and the dean of the Graduate School.

4. All graduate students must remain in good standing throughout their program. At a minimum, students not in good standing will not be able to compete for teaching assistantships or be awarded tuition waivers from the department, college or Graduate School. Students not in good standing risk being placed on probation and/or removed from the program. In order to remain in good standing in the program, students must:
   a. maintain a 3.00 GPA (cumulative) in all coursework listed on their GSP,
   b. file a GSP by the end of their first semester in residence and
   c. file satisfactory progress reports during each year in residence.

5. Within their first year in the program, each graduate student is required to submit a written thesis proposal that details the plan for the student’s graduate work. This document is developed in consultation with the graduate advisor, and once prepared must be submitted and approved by the student’s graduate study committee. A copy of the approved proposal shall be placed in the student’s departmental file.

6. Students will conduct the research outlined in the thesis proposal and present their results as a graduate thesis following guidelines provided by the Graduate School. This written thesis must be approved by the graduate study committee, the director of the Biological Sciences Department, the dean of the College of Arts and Sciences, and the dean of the Graduate School in order to be considered complete. No student shall graduate without completing a written thesis.

7. Following submission of their thesis to their GSC, students must present a thesis defense seminar, which will be followed by a private meeting with their graduate study committee to finalize the defense. The student must successfully defend the thesis in order to graduate.

A total of 30 credits is required for the degree.

**Program Student Learning Outcomes**

Students graduating with a Master of Science in Biological Sciences:

- Have mastered the fundamental concepts of biology, including cell and molecular biology, genetics, physiology, evolution and ecology.
- Will have a working knowledge of the principles of scientific methodology, of the methods and technology of biological research, of quantitative analysis of scientific data, and will be capable of writing a publishable scientific paper.
- Will have a demonstrated mastery of at least one focus area within biology or biochemistry.
- Are prepared for a career in biological sciences or are prepared to pursue more advanced research opportunities (e.g., PhD or postdoctoral programs).