Students in the MS program are required to complete a total of 54.0 units comprised of 12.0 units of core science (300 level courses), 3.0 units of professional development, 18.0 units of advanced technical electives (400 level courses), and 21.0 units of general elective courses (300 or 400 level) selected from introductory or advanced technical or business courses, and capstone opportunities such as the Team Masters Project, Independent Research, or Research Thesis Capstone.

**A summary of the MS curriculum is as follows:**

|  |  |  |
| --- | --- | --- |
| **MS without Research Thesis Option** |  | **MS with Research Thesis Option** |
| Core Science | 12.0 units |  | Core Science | 12.0 units |
| Professional Development | 3.0 units |  | Professional Development | 3.0 units |
| Advanced Technical Electives | 18.0 units |  | Advanced Technical Electives | 18.0 units |
| General Electives (including optional capstone) | 21.0 units |  | Research Thesis Capstone | 12.0 units |
|  |  |  | General Electives | 9.0 units |
| **Total** | **54.0 units** |  | **Total** | **54.0 units** |

**Core Science Courses:** All students must complete the core courses in order to complete the MS degree. The ALS 342 requirement will be waived for students who pass the initial statistics assessment. Waived units must be replaced with general elective units.

|  |  |
| --- | --- |
| ALS 300 Molecular Biotechnology | 1.5 units |
| ALS 320 Medical Diagnostics | 3.0 units |
| ALS 321 Medical Devices | 3.0 units |
| ALS 330 Pharmaceuticals Discovery  | 1.5 units |
| ALS 333 Pharmaceutical Development | 1.5 units |
| ALS 342 Applications of Statistics | 1.5 units |
| **Total** | **12.0 units** |

**Professional Development:** All students must complete 3.0 units of professional development in order to complete the MS degree. The ALS 360 requirement will be waived for students who pass the initial writing assessment. Waived units must be replaced with general elective units.

|  |  |
| --- | --- |
| ALS 341 Bioindustry Ethics and Society | 1.5 units |
| ALS 360 Business/Science Communications | 1.5 units |
| **Total** | **3.0 units** |

**Advanced and General Technical Electives:** All MS students are required to complete additional units of any KGI courses, 300-level or 400-level to achieve the required 54.0 unit total. Students are encouraged to consult with the MS program director for course selection. Not all electives are offered every year. Refer to the Henry E. Riggs School of Applied Life Science course list for course designation information.

**Research Thesis:** To complete the MS degree with a research thesis, students must complete 12.0 units of Research Thesis Capstone. It is highly recommended that students also complete independent study/Independent Research during the first year and/or complete a research project during the summer between first and second year. Thesis capstone must be approved prior to the start of the fall semester.

|  |  |
| --- | --- |
| ALS 495 Research Thesis Capstone | 6.0 units |
| ALS 495 Research Thesis Capstone | 6.0 units |
| **Total** | **12.0 units** |