# Bachelor of Science –Applied Mathematics Major – Geoscience Minor

## Four Year (120 credits)

**2023/2024** [Program Requirements](https://www.athabascau.ca/calendar/2023/undergraduate/program-regulations/degrees/bachelor-of-science-applied-mathematics-major.html) - Effective September 1, 2023

This program plan will assist you in planning your program. You must follow the official program requirements for the calendar year in which you are enrolled.  
  
Please contact [FST Student Success Centre](http://scis.athabascau.ca/contact-us/index.php) for program planning assistance.

|  |  |
| --- | --- |
| **Course Level Legend** JUNIOR / JR - 200 numbered course SENIOR / SR - 300 or 400 numbered course PREPARATORY - 100 numbered course | **Course Progress Legend** TR - Transfer Credit Awarded C - Completed AU Course IP - In Progress AU Course |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LEVEL** | **TOTAL CREDITS** | **COURSE** | **REQUIREMENT** | **COURSE  PROGRESS** | **COMMENTS** |
| Junior | 3 | [ENGL255](http://www.athabascau.ca/syllabi/engl/engl255.php) | Required Core  English Wiring Requirement |  | [Humanities](https://www.athabascau.ca/course/index.html?/undergraduate/humanities/all/) – ENGL255 is strongly recommended, can choose a different ENGL course as long as a minimum grade of B- is achieved |
| Junior | 6 | [COMP210](http://www.athabascau.ca/syllabi/comp/comp210.php) or [COMP200](http://www.athabascau.ca/syllabi/comp/comp200.php) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – if you plan to take more COMP courses we recommend COMP200. |
| Junior | 9 | [MATH215](http://www.athabascau.ca/html/syllabi/math/math215.htm) or [MATH216](http://www.athabascau.ca/html/syllabi/math/math216.htm) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 12 | [MATH265](http://www.athabascau.ca/html/syllabi/math/math265.htm) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 15 | [MATH270](https://www.athabascau.ca/syllabi/math/math270.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 18 | [MATH266](https://www.athabascau.ca/syllabi/math/math266.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 21 | [MATH271](https://www.athabascau.ca/syllabi/math/math271.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Jr/Sr | 24 | [MATH](https://www.athabascau.ca/course/index.html?/undergraduate/science/mathematics/) | Major Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 27 | [GEOL200](https://www.athabascau.ca/syllabi/geol/geol200.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 30 | [GEOL201](https://www.athabascau.ca/syllabi/geol/geol201.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 33 | [GEOG265](https://www.athabascau.ca/syllabi/geog/geog265.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 36 | [GEOG266](https://www.athabascau.ca/syllabi/geog/geog266.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Jr/Sr | 39 | [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Notes Below |
| Jr/Sr | 42 | [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Notes Below |
| Jr/Sr | 45 |  | Option |  | [Social Science](https://www.athabascau.ca/course/index.html?/undergraduate/social-science/all/) |
| Jr/Sr | 48 |  | Option |  | [Social Science](https://www.athabascau.ca/course/index.html?/undergraduate/social-science/all/) |
| Senior | 51 | [PHIL333](http://www.athabascau.ca/html/syllabi/phil/phil333.htm) or [PHIL371](http://www.athabascau.ca/html/syllabi/phil/phil371.htm) | Required Core |  | [Humanities](https://www.athabascau.ca/course/index.html?/undergraduate/humanities/all/) |
| Senior | 54 | [SCIE326](http://www.athabascau.ca/html/syllabi/scie/scie326.htm) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 57 | [MATH309](https://www.athabascau.ca/syllabi/math/math309.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 60 | [MATH315](https://www.athabascau.ca/syllabi/math/math315.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 63 | [MATH365](https://www.athabascau.ca/syllabi/math/math365.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 66 | [MATH366](https://www.athabascau.ca/syllabi/math/math366.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 69 | [MATH370](https://www.athabascau.ca/syllabi/math/math370.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 72 | [MATH376](https://www.athabascau.ca/syllabi/math/math376.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 75 | [MATH476](https://www.athabascau.ca/syllabi/math/math476.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 78 | [MATH](https://www.athabascau.ca/course/index.html?/undergraduate/science/mathematics/) | Major Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 81 | [MATH](https://www.athabascau.ca/course/index.html?/undergraduate/science/mathematics/) | Major Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 84 | [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Notes Below |
| Senior | 87 | [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Notes Below |
| Senior | 90 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Senior | 93 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Senior | 96 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Senior | 99 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Senior | 102 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Senior | 105 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Senior | 108 | [SCIE480](http://www.athabascau.ca/syllabi/scie/scie480.php) or [COMP494](http://www.athabascau.ca/syllabi/comp/comp494.php) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 111 |  | Option |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 114 |  | Option |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 117 | [MATH480](https://www.athabascau.ca/syllabi/math/math480.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 120 | [MATH495](https://www.athabascau.ca/syllabi/math/math495.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |

**Overall Program Requirements**

|  |
| --- |
| **Minimums** |
| 30 credits – Residency requirement (courses through AU) |
| 15 credits – Residency requirement in the major (courses through AU) |
| 9 credits – Residency Requirement in the minor (courses through AU) |
| 72 credits – **Senior** (300/400) level |
| 45 credits – **Senior** (300/400) level **Science** |
| 15 credits – **Senior Science credits at the 400 level** |
| 6 credits – In Social Science |
|  |
| **Maximums** |
| 75 credits – In **any one Science discipline** |
| 12 credits – Amount of senior project credits (495/496) |
| 6 credits – At the preparatory (100) level |
| 30 credits – Prior Learning Assessment and Recognition (PLAR) |

**Geoscience Minor Electives** – Students must complete a minimum of 12 credits from the following disciplines:

- Geology ([GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/))  
- Geography ([GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/))  
- Geophysics \*  
- Environmental Science ([ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/))

A minimum of 6 credits must be at the senior (300 or higher) level. Courses which are easily demonstrated to have closely-related science content (e.g. CHEM350) may be considered towards the credit requirements.

\*Note: AU does not currently offer Geophysics courses, but may accept external courses as transfer credit to be used towards the Geoscience electives.