# Bachelor of Science, Applied Mathematics Major, Geoscience Minor

## Four Year (120 credits)

**2025/2026** [Program Requirements](https://www.athabascau.ca/calendar/2025/undergraduate/program-regulations/degrees/bachelor-of-science-applied-mathematics-major.html) - Effective September 1, 2025

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.

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| **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 |

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| **LEVEL** | **TOTAL CREDITS** | **COURSE** | **REQUIREMENT** | **COURSE  PROGRESS** | **COMMENTS** |
| Junior | 3 | [ENGL 255](http://www.athabascau.ca/syllabi/engl/engl255.php) | Required Core  English Writing Requirement |  | [Humanities](https://www.athabascau.ca/course/index.html?/undergraduate/humanities/all/) – ENGL 255 is strongly recommended; students can choose a different junior or senior ENGL course as long as a minimum grade of B- is achieved |
| Junior | 6 | [MATH 215](http://www.athabascau.ca/html/syllabi/math/math215.htm) or [MATH 216](http://www.athabascau.ca/html/syllabi/math/math216.htm) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 9 | [MATH 265](http://www.athabascau.ca/html/syllabi/math/math265.htm) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 12 | [COMP 200](http://www.athabascau.ca/syllabi/comp/comp200.php) or [COMP 210](http://www.athabascau.ca/syllabi/comp/comp210.php) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – if you plan to take more COMP courses, we recommend completing COMP 200. |
| Junior | 15 | [MATH 270](https://www.athabascau.ca/syllabi/math/math270.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 18 | [MATH 266](https://www.athabascau.ca/syllabi/math/math266.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 21 | [MATH 271](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 | [GEOL 200](https://www.athabascau.ca/syllabi/geol/geol200.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 30 | [GEOL 201](https://www.athabascau.ca/syllabi/geol/geol201.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Junior | 33 | [GEOG 265](https://www.athabascau.ca/syllabi/geog/geog265.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – Replace GEOG 265 with [ENSC 200](https://www.athabascau.ca/syllabi/ensc/ensc200.html) |
| Junior | 36 | [GEOG 266](https://www.athabascau.ca/syllabi/geog/geog266.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – Replace GEOG 266 with [GEOL 207](https://www.athabascau.ca/syllabi/geol/geol207.html) |
| Jr/Sr | 39 | [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Note: Geoscience Minor electives below |
| Jr/Sr | 42 | [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Note: Geoscience Minor electives 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 | [SCIE 326](http://www.athabascau.ca/html/syllabi/scie/scie326.htm) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 54 | [PHIL 333](http://www.athabascau.ca/html/syllabi/phil/phil333.htm) or [PHIL 371](http://www.athabascau.ca/html/syllabi/phil/phil371.htm) | Required Core |  | [Humanities](https://www.athabascau.ca/course/index.html?/undergraduate/humanities/all/) |
| Senior | 57 | [MATH 309](https://www.athabascau.ca/syllabi/math/math309.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 60 | [MATH 315](https://www.athabascau.ca/syllabi/math/math315.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 63 | [MATH 365](https://www.athabascau.ca/syllabi/math/math365.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 66 | [MATH 366](https://www.athabascau.ca/syllabi/math/math366.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 69 | [MATH 370](https://www.athabascau.ca/syllabi/math/math370.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 72 | [MATH 376](https://www.athabascau.ca/syllabi/math/math376.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 75 | [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 | 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 | [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Notes Below |
| Senior | 84 | [ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/) or [GEOG](https://www.athabascau.ca/course/index.html?/undergraduate/science/geography/), or [GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/) | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See Notes Below |
| Senior | 87 |  | 400 Level Option |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 90 |  | Option |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/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 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Senior | 111 | [SCIE 480](http://www.athabascau.ca/syllabi/scie/scie480.php) or [COMP 494](http://www.athabascau.ca/syllabi/comp/comp494.php) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 114 | [MATH 476](https://www.athabascau.ca/syllabi/math/math476.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 117 | [MATH 480](https://www.athabascau.ca/syllabi/math/math480.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 120 | [MATH 495](https://www.athabascau.ca/syllabi/math/math495.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |

**Overall Program Requirements**

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| **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 or 400) level |
| 72 credits – **In Science** |
| 45 credits – **Senior** (300 or 400) level **Science** |
| 15 credits – **Senior 400 level Science** |
| 6 credits – In Social Science |
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| **Maximums** |
| 6 credits – At the preparatory (100) level |
| 75 credits – In **any one Science discipline** |
| 12 credits – Amount of senior project credits (495 or 496) |
| 30 credits – Prior Learning Assessment and Recognition (PLAR) |

**NOTE: Geoscience Minor electives**

Students must complete a minimum of 12 credits from the following disciplines:

- Environmental Science ([ENSC](https://www.athabascau.ca/course/index.html?/undergraduate/science/environmental-science/))  
- Geography ([GEOG](http://www.athabascau.ca/syllabi/scie/scie480.php?/undergraduate/science/geography/))  
- Geology ([GEOL](https://www.athabascau.ca/course/index.html?/undergraduate/science/geology/))  
- Geophysics\*

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. CHEM 350) 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.