# Bachelor of Science, Applied Mathematics Major, Game Programming 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 courseSENIOR / SR - 300 or 400 numbered coursePREPARATORY - 100 numbered course | **Course Progress Legend**TR - Transfer Credit AwardedC - Completed AU CourseIP - In Progress AU Course |

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| **LEVEL** | **TOTALCREDITS** | **COURSE** | **REQUIREMENT** | **COURSE PROGRESS** | **COMMENTS** |
| Junior | 3 | [ENGL 255](http://www.athabascau.ca/syllabi/engl/engl255.php)  | Required CoreEnglish 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) | Required Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| 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/) |
| Jr/Sr | 27 | [COMP 206](https://www.athabascau.ca/syllabi/comp/comp206.html) or [COMP 306](https://www.athabascau.ca/syllabi/comp/comp306.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/)  |
| Jr/Sr | 30 |  | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See NOTE: Game Programming Minor Electives below |
| Jr/Sr | 33 |  | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See NOTE: Game Programming Minor Electives below |
| Jr/Sr | 36 |  | Minor Elective |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) – See NOTE: Game Programming Minor Electives below |
| Jr/Sr | 39 |  | Option |  | [Social Science](https://www.athabascau.ca/course/index.html?/undergraduate/social-science/all/) |
| Jr/Sr | 42 |  | Option |  | [Social Science](https://www.athabascau.ca/course/index.html?/undergraduate/social-science/all/) |
| Jr/Sr | 45 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/all/) |
| Jr/Sr | 48 |  | Option |  | [Any Area of Study](https://www.athabascau.ca/course/index.html?/undergraduate/all/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 | [COMP 318](https://www.athabascau.ca/syllabi/comp/comp318.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 84 | [COMP 369](https://www.athabascau.ca/syllabi/comp/comp369.html) | Minor Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 87 | [COMP 390](https://www.athabascau.ca/syllabi/comp/comp390.html) | Minor Core |  | [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 |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/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 | [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 | 111 | [MATH 476](https://www.athabascau.ca/syllabi/math/math476.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 114 | [MATH 480](https://www.athabascau.ca/syllabi/math/math480.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 117 | [MATH 495](https://www.athabascau.ca/syllabi/math/math495.html) | Major Core |  | [Science](https://www.athabascau.ca/course/index.html?/undergraduate/science/all/) |
| Senior | 120 | [COMP 452](https://www.athabascau.ca/syllabi/comp/comp452.html) | Minor 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: Game Programming Minor**

Students must complete a minimum of 9 credits from the list below.

[COMP 214](https://www.athabascau.ca/syllabi/comp/comp214.html), [COMP 230](https://www.athabascau.ca/syllabi/comp/comp230.html), [COMP 232](https://www.athabascau.ca/syllabi/comp/comp232.html), [COMP 266](https://www.athabascau.ca/syllabi/comp/comp266.html), [COMP 268](https://www.athabascau.ca/syllabi/comp/comp268.html), [COMP 272](https://www.athabascau.ca/syllabi/comp/comp272.html), [COMP 282](https://www.athabascau.ca/syllabi/comp/comp282.html), [COMP 283](https://www.athabascau.ca/syllabi/comp/comp283.html), [COMP 308](https://www.athabascau.ca/syllabi/comp/comp308.html), [COMP 314](https://www.athabascau.ca/syllabi/comp/comp314.html),[COMP 347](https://www.athabascau.ca/syllabi/comp/comp347.html), [COMP 348](https://www.athabascau.ca/syllabi/comp/comp348.html), [COMP 361](https://www.athabascau.ca/syllabi/comp/comp361.html), [COMP 378](https://www.athabascau.ca/syllabi/comp/comp378.html), [COMP 466](https://www.athabascau.ca/syllabi/comp/comp466.html), [COMP 482](https://www.athabascau.ca/syllabi/comp/comp482.html), [COMP 486](https://www.athabascau.ca/syllabi/comp/comp486.html), [COMP 489](https://www.athabascau.ca/syllabi/comp/comp489.html)