

2022-2023 BMath (CS) + Artificial Intelligence Specialization

1. Please watch the "[How to Pick Your CS Checklist and Fill it in](#)" video.
2. Under **Required Courses** and **Electives**, check off the forty unique courses (20.0 units) that you have earned university credit for. **Additional Elective Units** can be *any* course for which you received university credit.
3. Verify that the **Required Courses** and **Electives** also satisfy the **Additional Constraints**.

Required Courses

- | | |
|--|--|
| <input type="checkbox"/> 7.75 CS Units | <input type="checkbox"/> 4.5 Math Units |
| <input type="checkbox"/> CS 1[134]5 | <input type="checkbox"/> MATH 1[34]5 |
| <input type="checkbox"/> CS 1[34]6 | <input type="checkbox"/> MATH 1[034]6 |
| <input type="checkbox"/> CS 136L (0.25 unit) | <input type="checkbox"/> MATH 1[234]7 |
| <input type="checkbox"/> CS 240 | <input type="checkbox"/> MATH 1[234]8 |
| <input type="checkbox"/> CS 241 | <input type="checkbox"/> MATH 2[34]5 |
| <input type="checkbox"/> CS 245 | <input type="checkbox"/> MATH 2[34]7 |
| <input type="checkbox"/> CS 246 | <input type="checkbox"/> MATH 2[34]9 |
| <input type="checkbox"/> CS 251 | <input type="checkbox"/> STAT 2[34]0 |
| <input type="checkbox"/> CS 341 | <input type="checkbox"/> STAT 2[34]1 |
| <input type="checkbox"/> CS 350 | |
| <input type="checkbox"/> CS 360 or CS 365 _____ | |
| <input type="checkbox"/> CS 370 or CS 371 _____ | |
| <input type="checkbox"/> CS 340-398; 440-489 _____ | |
| <input type="checkbox"/> CS 480 or CS 485 _____ | |
| <input type="checkbox"/> CS 486 | |
| <input type="checkbox"/> CS 492 | |

Electives

- | | |
|--|---|
| <input type="checkbox"/> 5.0 Non-Math Elective Units including Breadth and Depth: | <input type="checkbox"/> 1.25 Additional Math or Non-Math Elective Units |
| <input type="checkbox"/> Communication list I ¹ : _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Communication list II ² : _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Humanities: _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Humanities or non-math ³ : _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Social Science: _____ | |
| <input type="checkbox"/> Social Science: _____ | |
| <input type="checkbox"/> Pure Science: _____ | <input type="checkbox"/> 1.5 Additional Math Elective Units⁴ |
| <input type="checkbox"/> Pure or Applied Sciences: _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |

Additional Constraints

- | | | | | | | | | |
|--|--|-----------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|--|--|
| <input type="checkbox"/> ECE/SE 380 ⁵ | <input type="checkbox"/> List A ⁶ – Choose three courses below: | | | | | | | |
| <input type="checkbox"/> CO 367 | <input type="checkbox"/> CS 452 | <input type="checkbox"/> STAT 341 | <input type="checkbox"/> ECE 423 | <input type="checkbox"/> MSCI 446 | <input type="checkbox"/> MTE 544 | <input type="checkbox"/> SYDE 522 | | |
| <input type="checkbox"/> CO 456 | <input type="checkbox"/> CS 480 ⁶ | <input type="checkbox"/> STAT 440 | <input type="checkbox"/> ECE 481 | | | <input type="checkbox"/> SYDE 556 | | |
| <input type="checkbox"/> CO 463 | <input type="checkbox"/> CS 484 | <input type="checkbox"/> STAT 441 | <input type="checkbox"/> ECE 486 | | | <input type="checkbox"/> SYDE 572 | | |
| <input type="checkbox"/> CO 466 | <input type="checkbox"/> CS 485 ⁶ | <input type="checkbox"/> STAT 444 | <input type="checkbox"/> ECE 488 | | | | | |

- Depth** - 1.5 units in the same subject where either:
(a) at least 0.5 unit is 3xx or higher, **or**
(b) all three form a prerequisite chain.

Courses for breadth can also be used for depth.

Write the non-math elective units from above that you will use for depth.

- | |
|--------------------------------|
| <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ |

- | |
|---|
| <input type="checkbox"/> Seven (regular) or eight (co-op) terms enrolled in at least three courses totaling 1.5 units |
| <input type="checkbox"/> No more than 2.0 units of failed courses |
| <input type="checkbox"/> No more than 5.0 units of unusable course attempts (failures and repeats of passed courses) |
| <input type="checkbox"/> CS major average of 60% or higher |
| <input type="checkbox"/> Cumulative average of 60% or higher |
| <input type="checkbox"/> Co-op requirements met, if applicable, including PD 1, PD 11, PD 10, and a minimum of two other PD courses |

¹Communication List I: At least 60% in one of EMLS 101R, EMLS 102R, EMLS/ENGL 129R, ENGL 109, SPCOM 100, SPCOM 223.

²Communication List II: One of EMLS 103R, EMLS 104R, EMLS 110R, ENGL 101B, ENGL 108B, ENGL 108D, ENGL 119, ENGL 208B, ENGL 209, ENGL 210E, ENGL 210F, ENGL 378/MTHEL 300, SPCOM 225, SPCOM 227, SPCOM 228, or an additional course from Communication List 1.

³The courses below can be used to satisfy both the Communication List II requirement **and** 0.5 unit for the humanities (breadth) requirement.

- ENGL 101B, ENGL 108B, ENGL 108D, ENGL 119, ENGL 208B, ENGL 209, ENGL 210E, ENGL 210F, ENGL 378/MTHEL 300, SPCOM 225, SPCOM 227, SPCOM 228.

If you use one of the Communication List II courses for humanities, then the checkbox needs to be replaced by any non-Math course.

⁴Three additional courses labeled ACTSC, AMATH, CO, PMATH, STAT, excluding the following:

- Courses with requisites normally excluding Honours CS students
- Courses cross-listed with a CS course
- Courses explicitly listed in CS major plans as alternatives to CS courses
- Reading and topics courses
- ACTSC 221, CO 353, CO 380, CO 480

⁵For ECE 380/SE 380, MATH 213 is an acceptable alternative for its noted prerequisite. Alternatively, ECE 380/SE 380 can be substituted with CS 480, CS 484, or CS 485. If this substitution is chosen, then the substituted CS course cannot be used towards the one of 'three additional courses' from List A.

⁶At least one of the 'three additional courses' must be from Math and at least one from Engineering. Special topics courses (e.g. CS 489) may sometimes be appropriate for this option; interested students should see a CS advisor for confirmation. Please note that you must complete the appropriate prerequisites in order to take the engineering courses required for AI specialization. In some cases, you may be required to take more courses beyond what is noted on the checklist. Engineering courses listed here cannot be used towards non-math electives.

⁶One of CS 480 and CS 485 is required. If both courses are taken, then one of them would count as one of 'three additional courses' from List A. However, please see the restriction noted for these courses in footnote #4.

Disclaimer: This checklist is a handy tool, but it is not a substitute for the official degree regulations. You may complete the checklist and ask a CS advisor to review it, but the student is ultimately responsible for ensuring that they have met their degree requirements. If there is a question of interpretation or a discrepancy, the [University Calendar](#) always takes precedence.