Honours in Combinatorics & Optimization Checklist (updated May 2023)

Contact **David Jao** (coundergrad.officer@uwaterloo.ca) for further assistance.

Notational conventions: brackets indicate choice lists; i.e., "1[34]5" is a short-hand for "135 **or** 145"; ☐ indicate requirements.

Disclaimer: In case of discrepancies between the checklist and the University Calendar located at:

http://ugradcalendar.uwaterloo.ca/page/MATH-Combinatorics-and-Optimization2

The University Calendar will always take precedence. This checklist does not apply to students in Double Degree plans.

You may replace CS courses with the corresponding courses available to CS Honours Computer Science major students.

	MATH	**STAT**
☐ Minimum 20 course units	☐ 1[034]6	☐ 2[34]0
☐ Minimum 5 non-math course units[2]	☐ 1[234]7	☐ 2[34]1
☐ Minimum 60% cumulative and 65% major average	☐ 1[234]8	**CS**
☐ Maximum 2 course units excluded/failed[3]	☐ 1[34]5	☐ One of: 115, 135, 145
☐ Maximum 5 units of unusable course attempts	☐ 2[34]5	☐ One of: 116, 136, 146
☐ Minimum 7 full-time terms (regular),	☐ One of: 237, 239, 247, 249	**COOP (if applicable)**
8 full-time terms (coop)		☐ Minimum COOP course units: 2.5
☐ Undergraduate Communication Requirement[4]		☐ Minimum PD course units: 2.5

☐ MATH 2[34]9

☐ CO 25[05]

☐ CO 330 **or** CO 342

☐ CO 351 **or** CO 353 **or** CO 367[5]

☐ PMATH 336 **or** 346 **or** 347

☐ 3 courses from:
- MATH 237 **or** 247
- AMATH 331/PMATH 331 **or** PMATH 333 **or** PMATH 351
- AMATH 332/PMATH 332 **or** PMATH 352
- PMATH 334 **or** 348
- PMATH 340 **or** PMATH 440 **or** PMATH 441
- CS 462[6]
- CS 466[6]
- CS 487[6]

☐ 3 additional courses from:

CO 330, 331, 342, 351, 353, 367, CO 430 – 487 (excluding 480)

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☐ 2 additional 300/400 level Math courses, non-CO prefix[1,7]

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☐ 1 additional 300/400 level Math course[1]

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☐ 3 additional Math courses[1]

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[1]**Math courses:**
- Courses/Cross-listed courses with prefixes: ACTSC, AMATH, CO, CS, MATBUS, MATH, PMATH, or STAT
- Additionally, any course cross-listed with one of these subject codes is considered a MATH course.

[2]**Non-math courses:**
- Courses with the prefix COMM, MTHEL, and those courses offered by other faculties (excluding courses cross-listed with math courses and courses listed above as math courses)
- COOP and PD courses do not count as math or non-math courses

[3]Excluding PD courses and co-op work-term courses.

[4]English writing skills requires one of:
- At least 60% in one of the following courses (prior to 2A term): COMMST [100, 223], EMLS [101R, 102R], EMLS/ENGL 129R, ENGL 109
- One of the following courses: COMMST [225, 227, 228], EMLS [103R, 104R, 110R], ENGL [101B, 108B, 108D, 119, 208B, 209, 210E, 210F], ENGL 378/MTHEL 300

[5]If CO 255 is taken, this requirement can be satisfied by taking one of CO 450, 452, 454, 456, 459, 463, 466, or 471.

[6]These courses are only open to CS majors

[7]CS 467 is cross-listed with CO 481 and therefore does not count for this requirement.