Honours in Mathematical Optimization:
Business Specialization 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-Mathematical-Optimization-Degree-Requirements

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), 8 full-time terms (coop)	☐ One of: 237, 239, 247, 249	**COOP (if applicable)**
☐ Undergraduate Communication Requirement[4]		☐ Minimum COOP course units: 2.5
		☐ Minimum PD course units: 2.5

☐ MATH 2[34]7	☐ ECON 101
☐ MATH 2[34]9	☐ MSCI 211
☐ AMATH 242/CS 371 **or** CS 370	☐ STAT 340
☐ CO 25[05]	☐ Three additional courses from the following: CO 342, 351, 353, 367, 372, 450, 452, 454, 456, 463, 466, 471
☐ CS 330 **or** CS 490	_____
☐ AFM 101	_____
☐ CO 370	_____

None of the courses given above can be used to meet the following requirements:[5]

☐ ACTSCI 231	☐ CS 338	☐ 2 additional courses chosen from: AMATH 350, BUS 435W, BUS 445W, BUS 455W, BUS 485W, CS 230, CS 234, MSCI 311, MSCI 436, STAT 440, STAT 442, STAT 444
☐ AFM 102	☐ ECON 102	
☐ BUS 111W	☐ MSCI 432	
☐ BUS 121W	☐ STAT 371	_____
☐ BUS 352W	☐ STAT 372	_____
☐ BUS 481W		

[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]Undergraduate Communication Requirement requires:
- 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]The Mathematical Optimization – Business Specialization cannot be combined with any other business or accounting academic plans.