

# 2020-2021 BCS + Digital Hardware Specialization

1. 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.
2. Verify that the **Required Courses** and **Electives** also satisfy the **Additional Constraints**.

## Required Courses

- 7.5 CS Units
  - CS 1[134]5
  - CS 1[34]6
  - CS 240
  - CS 241
  - CS 245
  - CS 246
  - ECE 222
  - CS 341
  - CS 350
  - CS 340-398; 440-489
  - CS 340-398; 440-489
  - CS 340-398; 440-489
  - CS 450 or ECE 429
  - CS 440-489
  - CS 440-498 or CS 499T or CS 6xx or CS 7xx or CO 487 or STAT 440

- 3.5 Math Units
  - MATH 1[34]5
  - MATH 1[34]6
  - MATH 1[234]7
  - MATH 1[234]8
  - MATH 2[34]9
  - STAT 2[34]0
  - STAT 2[34]1

## Electives

- 5.0 Non-Math Elective Units
  - Communication list I<sup>1</sup>
  - Communication list II<sup>2</sup>
  - GENE 123 or MTE 120
  - ECE 124
  - ECE 224 or MTE 325
  - ECE 327
  - ECE 423
  - Recommended: ECE 455
  - Recommended: PHYS 121
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- 4.0 Additional Elective Units
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## Additional Constraints

- Two of:
  - CS 452
  - CS 454
  - CS 456
  - CS 457
- Non-math elective units must satisfy [breadth and depth](#) requirements:
  - All of (breadth):
    - 1.0 units from the humanities<sup>3</sup>
    - 1.0 units from the social sciences
    - 0.5 units from the pure sciences
    - 0.5 units from the pure or applied sciences
  - The depth requirement is automatically met by the required ECE courses.
- Seven (regular) or eight (co-op) terms enrolled in at least three courses totaling 1.5 units
- No more than 2.0 units of failed courses
- No more than 5.0 units of unusable course attempts (failures and repeats of passed courses)
- CS major average of 60% or higher
- Cumulative average of 60% or higher
- Co-op requirements met, if applicable, including PD 1, PD 11, PD 10, and a minimum of two other PD courses

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

<sup>2</sup>Communication List II: One of EMLS 103R, EMLS 104R, EMLS 110R, 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.

<sup>3</sup>The below Communication courses from List II can be used to satisfy both the Communication List II requirement *and* 0.5 unit for the humanities (breadth) requirement. Communication List I courses do NOT satisfy the humanities (breadth) requirement.

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

Disclaimer: This checklist is a handy tool, but it is not a substitute for the official degree regulations. If there is a question of interpretation or a discrepancy, the University Calendar always takes precedence: <http://ugradcalendar.uwaterloo.ca/group/MATH-Computer-Science-1>. 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.