Carleton First Year
CS Course Selection Guide
Introductions!

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→ undergraduate_advisor@scs.carleton.ca
Carleton Resources

➔ Health and Counselling services
➔ Academic Advising Centre
  ◆ Manage your academic standing
  ◆ Academic Counselling
➔ Career Services
PC or MAC laptops with the following minimum specifications:

➔ CPU: Intel i5/i7/i9/Xeon or AMD Ryzen line
➔ 8 GB or more of RAM
➔ 256 GB or larger hard drive (SSD drive recommended)
➔ wireless networking (WiFi)
➔ camera, mic and audio
Academic & Financial Deadlines

➔ June 24-26, 2020: Course Registration for Incoming students

➔ August 25, 2020: Fall Payment Deadline

➔ September 8, 2020: Academic Orientation (subject to change)

➔ September 23, 2020: Last day to register for Fall term

➔ September 30, 2020: Last day to withdraw from fall term and fall/winter courses with a full fee adjustment
Matters Series Courses

➔ COMP 0999 - COMP Matters
   ◆ Register for this with your fall courses
   ◆ 2 week session Aug 10 - Aug 21
   ◆ https://sssc.carleton.ca/index.php/compmatters/frequently-asked-questions

➔ MATH 0999 - MATH Matters
   ◆ August 24 - August 28
   ◆ https://carleton.ca/mathmatters/
Computer Science Course

- Lectures
- Tutorials
- Assignments
  - Online submission servers
  - Virtual Environments
- Midterms
- Exam
Required First Year Courses

→ COMP 1405: Introduction to Computer Science I
→ COMP 1406: Introduction to Computer Science II
→ COMP 1805: Discrete Structures I
→ MATH 1007: Elementary Calculus I
→ MATH 1104: Linear Algebra for Engineering or Science

**Special note about COMP 1405/1406 Z**
Required Second Year Courses

→ **COMP 2401:** Introduction to Systems Programming
→ **COMP 2402:** Abstract Data Types and Algorithms
→ **COMP 2404:** Introduction to Software Engineering
→ **COMP 2406:** Fundamentals of Web Applications
→ **COMP 2804:** Discrete Structures II
→ **STAT 2507:** Introduction to Statistical Modeling I
# Computer Science

## B.C.S. Honours (20.0 credits)

### A. Credits Included in the Major CGPA (9.0 credits)

<table>
<thead>
<tr>
<th>Credits</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5</td>
<td>COMP 1405</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>6.5</td>
<td>COMP 1406</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>6.5</td>
<td>COMP 1805</td>
<td>Discrete Structures I</td>
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<tr>
<td>6.5</td>
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</tr>
<tr>
<td>6.5</td>
<td>COMP 2804</td>
<td>Discrete Structures II</td>
</tr>
<tr>
<td>6.5</td>
<td>COMP 3000</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>6.5</td>
<td>COMP 3004</td>
<td>Object-Oriented Software Engineering</td>
</tr>
<tr>
<td>6.5</td>
<td>COMP 3005</td>
<td>Database Management Systems</td>
</tr>
<tr>
<td>6.5</td>
<td>COMP 3007</td>
<td>Programming Paradigms</td>
</tr>
<tr>
<td>6.5</td>
<td>COMP 3804</td>
<td>Design and Analysis of Algorithms I</td>
</tr>
</tbody>
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### B. Credits Not Included in the Major CGPA (11.0 credits)

<table>
<thead>
<tr>
<th>Credits</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>COMP 4905</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>2.0</td>
<td>COMP 4906</td>
<td>Operating Systems</td>
</tr>
</tbody>
</table>

### Notes

- 0.5 credit in COMP at the 2000-level or above
- 2.0 credits in COMP 4905 and 1.5 credits in COMP at the 4000-level, or COMP 4906 and 1.0 credit in COMP at the 4000-level

### Total Credits

20.0
Prerequisite Tree

Diagram showing the relationships between courses with arrows indicating prerequisites.
If you have scheduling conflicts or can't get into a course:

➔ You can take COMP 1805 first term (not recommended)
➔ You can do the two MATH courses in either order

Please keep in mind:

➔ Work / life balance
➔ Adjusting to University
➔ Enjoy your first year!
The Game Development and Mobile streams = only streams with required first year courses.

The other streams do not come into effect until you reach 3000 level courses.

Can transfer streams via Carleton Central so long as you’re already in a stream or in Honours.

If you complete the Mobile or Game Dev stream specific courses and decide to switch streams later, these courses will count as free electives.
If you took AP classes in high school and completed the AP exam with a level of 4, you can receive advanced standing credit.

https://admissions.carleton.ca/apply/transfer-credit/transferadvanced-standing-credit-ap/
Breadth vs Free Electives

- Breadth Electives are all courses offered by the Faculty of Arts and Social Sciences, the Faculty of Public Affairs, the Sprott School of Business and the Faculty of Science except for courses in COMP, MATH, STAT and the Prohibited Courses category.

- Once you’ve completed your breadth electives, any courses you take that would have been considered breadth are used as free electives.

- You cannot take more than 7.0 credits of 1000-level courses for your entire program.
Elective Suggestions

- Take electives that genuinely interest you, not just bird courses
- Think about using your electives to do a minor
  - BCS students can add up to 2 minors
- Save courses that can normally be done online to do while on co-op or during the summer
Elective Suggestions (related to CompSci)

→ **CGSC 1001: Mysteries of the Mind**
  ◆ The prof Jim Davies is a Cross-Appointed Faculty member (Computer Science & Cognitive Science)
  ◆ He discusses computer science concepts (AI, neural nets etc.) at a very high level in this course

→ **LING 1001: Introduction to Linguistics I**
  ◆ More technical than LING 1100

→ **LING 1100: The Mysteries of Language**
  ◆ Recommended for people who enjoyed CGSC 1001

→ **PHIL 2001: Introduction to Logic**
  ◆ This course covers concepts from COMP 1805

→ **PHIL 2003: Critical Thinking**
  ◆ Similar to PHIL 2001
Elective Suggestions (others)

- PSYC1001 & PSYC1002: Introduction to Psychology I and II
  - Similar to CGSC1001
  - A lot of psyc courses can be taken online

- BIOL 1902: Natural History
  - The literal bird course

- ERTH 2415: Natural Disasters

- ERTH 2401: Dinosaurs

- STAT 2507 (first year)
  - This will alleviate a heavier course load later on
Carleton Central Tips

- Add all the courses you want to a worksheet & slowly remove scheduling conflicts
- Make several different backup schedules for registration day so that you don't need to modify or create a new worksheet
- You can submit override requests on Carleton Central
Academic Audit

HONOURS COMPUTER SCIENCE MAJOR REQUIREMENTS

Part A - 6.5 credits are required

Earned: 4.50 Credits

1. 0.5 credit in COMP 1405
   0.50 cr. Complete
   18FA COMP 1405 0.80

2. 0.5 credit in COMP 1406
   0.50 cr. Complete
   18WF COMP 1406 0.80

3. 0.5 credit in COMP 1805
   0.50 cr. Complete
   19HM COMP 1805 0.80

4. 0.5 credit in COMP 2401
   0.50 cr. Complete
   19FA COMP 2401 0.80

5. 0.5 credit in COMP 2402
   0.50 cr. Complete
   19FA COMP 2402 0.80

6. 0.5 credit in COMP 2404
   0.50 cr. Complete
   20FM COMP 2404 0.80

7. 0.5 credit in COMP 2406
   0.50 cr. Complete
   19FA COMP 2406 0.80

8. 0.5 credit in COMP 2804
   0.50 cr. Complete
   20WM COMP 2804 0.80

9. 0.5 credit in COMP 3000
   Needs: 0.50 Credits

10. 0.5 credit in COMP 3004
    Needs: 0.50 Credits

11. 0.5 credit in COMP 3005
    0.50 cr. Complete
    20FM COMP 3005 0.80

12. 0.5 credit in COMP 3007
    Needs: 0.50 Credits

13. 0.5 credit in COMP 3804
    Needs: 0.50 Credits
CCSS Email: info@ccss.carleton.ca
CCSS Website: https://ccss.carleton.ca
CCSS Facebook: https://www.facebook.com/CarletonComputerScienceSociety/
CCSS Instagram: https://www.instagram.com/carletoncss/

SCS Website: https://carleton.ca/scs/
SCS Undergraduate Advisor Email: undergraduate_advisor@scs.carleton.ca
Important Information for First Year Students:
https://carleton.ca/scs/current-students/undergraduate-students/important-information-for-1st-year-students/