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# COMP 564 Advanced Computational Biology Methods and Research (3 credits)

Offered by: Computer Science ([Faculty of Science \(/study/2022-2023/faculties/science/\)](#))

## Overview

Computer Science (Sci) : Fundamental concepts and techniques in computational structural biology, system biology. Techniques include dynamic programming algorithms for RNA structure analysis, molecular dynamics and machine learning techniques for protein structure prediction, and graphical models for gene regulatory and protein-protein interaction networks analysis. Practical sessions with state-of-the-art software.

**Terms:** This course is not scheduled for the 2022-2023 academic year.

Instructors: There are no professors associated with this course for the 2022-2023 academic year.

- 3 hours
- Prerequisite: [COMP 462 \(/study/2022-2023/courses/comp-462/\)](#).
- Corequisite(s): [COMP 462 \(/study/2022-2023/courses/comp-462/\)](#) or [COMP 561 \(/study/2022-2023/courses/comp-561/\)](#)

*This course may be used as a required or complementary course in the following programs:*

[Bachelor of Science \(B.Sc.\) - Honours Statistics and Computer Science](#)  
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-honours-statistics-and-computer-science/>)

[Bachelor of Science \(B.Sc.\) - Major Statistics and Computer Science](#)  
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics-and-computer-science/>)

[Doctor of Philosophy \(Ph.D.\) - Computer Science](#)  
(<https://www.mcgill.ca/study/2022-2023/faculties/science/graduate/programs/doctor-philosophy-phd-computer-science/>)

[Master of Science \(M.Sc.\) Cell Biology \(Thesis\)](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-cell-biology-thesis)  
(<https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-cell-biology-thesis>)

[Master of Science \(M.Sc.\) Computer Science \(Non-Thesis\)](https://www.mcgill.ca/study/2022-2023/faculties/science/graduate/programs/master-science-msc-computer-science-non-thesis)  
(<https://www.mcgill.ca/study/2022-2023/faculties/science/graduate/programs/master-science-msc-computer-science-non-thesis>)

[Master of Science \(M.Sc.\) Computer Science \(Thesis\)](https://www.mcgill.ca/study/2022-2023/faculties/science/graduate/programs/master-science-msc-computer-science-thesis)  
(<https://www.mcgill.ca/study/2022-2023/faculties/science/graduate/programs/master-science-msc-computer-science-thesis>)



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