

STAT 280
Introduction to Statistical Programming
Fall 2020

Delivery Method: This course, the midterm and final exam, will be online.

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Office Hours: Tuesdays, 9:00-10:30 AM. Online via Zoom.

Textbook: *A first course in statistical programming with R*, Second Edition. Braun, W. J., & Murdoch, D. J. (2016). Cambridge University Press.
E-textbook: <https://doi.org/10.1017/CBO9781316451090>
The digital version of the textbook will be available at:
<https://www.co-opbookstore.ca/service/textbooks/>
The print version of the textbook will be available at:
<https://www.bkstr.com/concordiastore/home>
Note: Students should order textbooks as early as possible, especially for print versions in case books are backordered or there are any shipping delays.

Description: Statistical programming is an indispensable instrument in the toolkit of the modern data scientist. This course is an introduction to statistical programming and computational statistics using the R programming language (<https://www.r-project.org/>). Basic programming concepts such as data structures, flow control statements, and algorithms are introduced. The course also includes data manipulation methods and visualization tools for programming statistical graphics. The use of the R language for numerical linear algebra, statistical simulation, and optimization is also illustrated.

Final Grade: Students will be evaluated based on homework assignments, a mid-term project and a final project, according to the following grading scheme:
20% Assignments + 30% Mid-term project + 50% Final project.

Further information will be communicated via Moodle.

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." [*Undergraduate Calendar, Sec 17.10.2*].

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Disclaimer: In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in the course is subject to change.