
STAT 5702 – Modern Applied and Computational Statistics
WINTER 2020

Instructor	Dr. Jason D. Nielsen
Contact Info.	Office: 5217 HP, ext. 2141 Email: jdn@math.carleton.ca Web page: http://www.math.carleton.ca/~jdn
Office Hours	Tuesday 13:00-14:00 or by appointment
Lectures	Tuesday and Thursday 10:05-11:25 in SA 314
Assignments	Four assignments will be passed out and handed in during lectures. Due dates will be announced in class and posted on cuLearn.
Final	Take-home final (Due date TBA).
Grading	Assignments: 50 % Final: 50 % In order to pass the course you must obtain a cumulative mark of at least 50% and no less than 40% on any one of the above components.

Course Description

This course will focus on the theoretical foundations as well as the practical implementation of numerical methods in statistics. Topics to be covered include: floating point representation of real numbers, pseudo-random number generation, simulation methods for inference, bootstrapping, numerical optimization, estimation of functions/density estimation and Markov chain Monte Carlo methods.

Academic Integrity Policy

<https://carleton.ca/registrar/academic-integrity>.

Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the [Student Guide](#).

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the [Student Guide](#).

Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website (<http://carleton.ca/pmc>) for the deadline to request accommodations for the formally-scheduled exam (if applicable).