
COURSE TIMES + LOCATION:

Normal Data with Noninformative and Conjugate Priors
Scientific Application: Estimating the Speed of Light
Multinomial Models
Scientific Application: Analysis of a Bioassay Experiment

Part 4: Bayesian Computing

Introduction to Bayesian Computing
Rejection Sampling
Importance Sampling
Introduction to Markov Chain Monte Carlo
Metropolis and Metropolis-Hastings Algorithms
Gibbs Sampler
Hybrid and Alternative Algorithms
Scientific Application: Inference in High-Energy Astrophysics

Part 5 (time permitting):

Bayesian Hierarchical Models
Hyperpriors
James-Stein Estimators and Shrinkage
Scientific Application: Supernova Color Corrections

Grading

Assignments	35%
Midterm	30%
Final Exam	35%

NOTES:

Above grading is subject to change.

REQUIREMENTS:

Your personalized Course Material list, including digital and physical textbooks, are available through the SFU Bookstore website by simply entering your Computing ID at: shop.sfu.ca/course-materials/my-personalized-course-materials.

DEPARTMENT UNDERGRADUATE NOTES:

Students with Disabilities:

Students requiring accommodations as a result of disability must contact the Centre for Accessible Learning 778-782-3112 or caladmin@sfu.ca.

Tutor Requests:

Students looking for a tutor should visit <https://www.sfu.ca/stat-actsci/all-students/other-resources/tutoring.html>. We accept no responsibility for the consequences of any actions taken related to tutors.

REGISTRAR NOTES:

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

SFU's Academic Integrity website <http://www.sfu.ca/students/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the university community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the university. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the university. <http://www.sfu.ca/policies/gazette/student/s10-01.html>