

COURSE OUTLINES

SS2864 A – Statistical Programming Fall 2019

Course Information

Course Description: An introduction to statistical programming using R.

Prerequisite Requirements

A minimum mark of 60% in [Statistical Sciences 2857A/B](#) (or the former Statistical Sciences 2657A/B) or a minimum mark of 70% in one of [Statistical Sciences 2035](#), [Statistical Sciences 2141A/B](#), [Statistical Sciences 2143A/B](#), [Statistical Sciences 2244A/B](#), [Biology 2244A/B](#), [Economics 2222A/B](#), [MOS 2242A/B](#), [Psychology 2810](#); and enrollment in a module offered by the departments of Applied Mathematics; Mathematics; and Statistical and Actuarial Sciences.

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Pre-or Corequisite(s): [Statistical Sciences 2858A/B](#) for those using Statistical Sciences 2857A to meet the prerequisites.

Lecture Hours Tue 8:30 AM-10:30 AM NCB 114; Thu 8:30 AM-9:30 PM NCB 114

Tutorial Hours Thu 9:30 AM-11:30 PM HSB 13

Instructor Information

Instructor: Jiandong Ren
Office: WSC 219
Email: jren6@uwo.ca
Phone: 519-661-2111, Ext 88209
Office hours: Tue 2-3:30pm, Thu 2-3:30pm.

Course Materials

Textbook

Braun and Murdoch (2016) A First Course in Statistical Programming with R, Cambridge University Press. 2nd Edition

References

An Introduction to R

These manuals are available online at www.r-project.org.

The R programming system can also be downloaded from that site.

Topics covered

1. Elementary computer programming as needed in statistics and actuarial science.
2. Elementary statistical data management.
3. Elementary statistical graphics.
4. Simulation of random variables and simple stochastic processes.
5. Numerical linear algebra.

Course Website

OWL is Western University's online learning management system. Relevant readings, assigned practice questions, slides and announcements will be posted on the course OWL web page. It is the students' responsibility to check the course owl site regularly.

Methods of Evaluation

Assignments

There will be four assignments, which students need to finish independently.

A Course Project

There will be a group project, which students in group of 4 need to complete. In the project, students find a dataset of interest and perform elementary data analysis. The project will be evaluated by a 10-minutes group presentation and a project report.

Midterms or Tests

One 110-minute midterm test will be given on October 22 in class.

Final Exam

The date and time for the 3-hour final exam will be announced by the registrar's office, usually near the first part of November. Students are required to wait until the final exam schedule is posted before making arrangements for travel over the Christmas period. Exams will NOT be moved to accommodate students who ignore this requirement.

The overall course grade will be calculated as listed below:

Assignments	20%
Project	15%
Midterm Exam	20%
Final Exam	45%

Computing and/or Calculator Requirement

Need a computer (desktop or laptop) with the latest version of R and R studio installed.

Students should bring a laptop to each class.

Accommodation and Accessibility

If you are unable to meet a course requirement due to illness or other serious circumstances, you must seek approval for the absence as soon as possible. Approval can be granted either through a self-reporting of absence or via the Dean's Office/Academic Counselling unit of your Home Faculty. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located in NCB 280, and can be contacted at scibmsac@uwo.ca.

For further information, please consult the university's policy on academic consideration for student absences:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf.

Missed Midterm or Test: The policy of the department of Statistical and Actuarial Sciences is that there will be no make-up exams for a missed midterm. For those that do legitimately miss a midterm and provide the required supporting documentation, the standard practice will be that the weight of the midterm will be reassigned to the final exam. If your reason is not deemed valid, then you will receive a mark of 0.

If you miss the Final Exam, please contact your faculty's Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see http://www.registrar.uwo.ca/examinations/exam_schedule.html).

Academic Policies

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

7.1 UWO email account

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html>, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

7.2 Scholastic offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at this website: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

7.3 Attendance

Classroom attendance is viewed as an important part of the learning process. Students are advised that excessive absenteeism may result in the student being disbarred from the final exam (see Western Academic Calendar).

7.4 Classroom Environment

The Department has adopted a "Mutual Expectations" policy governing the classroom environment and all work submitted by students. The full text of the policy can be found at: http://www.stats.uwo.ca/mutual_expectations.pdf.

In summary, the policy was developed under the premise that all interactions between students and faculty should be governed by the principles of courtesy, respect and honesty.

Support Services

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 ext. 82147 if you have questions regarding accommodation.

The policy on Accommodation for Students with Disabilities can be found here: www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_disabilities.pdf

The policy on Accommodation for Religious Holidays can be found here: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/mental_health) for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. Email communication should only be used to provide them with information or to ask a question that requires a brief response. For more lengthy discussions and for discussions on lectures/course material please see your instructor during their scheduled office hours or by appointment. If you do email them, please use your UWO account, as these are often the only emails read (as emails sent from other addresses often get spammed).