

## Statistical Programming 2018/2019 (Statistical Science 2864B)

### 1. General Course Information

*Prerequisites:* SS2857A/B or the former Statistical Sciences 2657A/B - a minimum mark of 60% in Statistical Sciences 2857A/B or 2657A/B

*Pre/corequisites:* Statistical Sciences 2858A/B.

*Lecture Hours:* Mon, Wed, Fri, 3:30 PM-4:30 PM, WSC-55

*Tutorial Hours:* Thu, 1:30 PM-2:30 PM, HSB-14  
Thu, 2:30 PM-3:30 PM, HSB-16  
Thu, 3:30 PM-4:30 PM, HSB-16

*Pre/Corequisites Warning:* 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.

### 2. Instructor Information

*Instructor:* Katsu Goda  
*Office:* B&GB 1076  
*Email:* [kgoda2@uwo.ca](mailto:kgoda2@uwo.ca)  
*Phone:* 519-661-2111 ext. 83189  
*Office Hours:* Mon, Wed, 4:30 PM-6:00 PM

You are welcome to communicate with your instructor by email, but email communication should only be used to provide them with information or to ask a question that requires a brief response. For lengthier discussions and for discussions on lectures/course material, please see your instructor during their scheduled office hours or by appointment. When you send email, please use your UWO account (@uwo.ca), as these may be the only emails read.

### 3. Course Description/Syllabus

An introduction to programming using a high-level language (currently R).

### 4. Topics covered will include

1. Elementary computer programming as needed in statistics and actuarial sciences
2. Programming elementary statistical graphics
3. Simulation of random variables and simple stochastic processes
4. Numerical linear algebra
5. Numerical function optimization

### 5. Course Materials

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

Additional book: *An Introduction to R and The R Language Definition*. These manuals are available online at [www.r-project.org](http://www.r-project.org). The R programming system can also be downloaded from that site, or you may use the link on the course webpage.

Students should check OWL (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. Students are responsible for checking OWL on a regular basis.

## 6. Methods of Evaluation

The overall course grade will be calculated as listed below:

*Assignments:* 40% - there are 4 assignments (with scheduled dates announced in the lectures)

*Mid-term Test:* 20% - 40-min quiz, 13 February 2019

*Final Exam:* 40% - 3-hour exam, April (as scheduled by the Registrar)

*Computing and/or Calculator Requirement:* Students need a computer (desktop or laptop) with the newest version of R and R studio installed.

*Missed Midterm 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.

## 7. Accommodation and Accessibility

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or supporting documentation to the Academic Counselling Office of your home faculty as soon as possible and contact your instructor immediately. If accommodation is approved by your Dean's office, your instructor will be notified, then it is your responsibility to make alternative arrangements with your instructor. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located in WSC 140 and can be contacted at [scibmsac@uwo.ca](mailto:scibmsac@uwo.ca). For further information, please consult the university's medical illness policy at [http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf).

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](http://www.registrar.uwo.ca/examinations/exam_schedule.html)).

## 8. Academic Policies

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

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html>, the centrally administered email 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 email received from the University at his/her official university address is attended to in a timely manner.

*Scholastic offence:* 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](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf).

*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).

*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: <https://www.uwo.ca/stats/undergraduate/mutual-expectations.html>. 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.

## 9. 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](http://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](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](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>.