

SS3850G: Data Analysis

1. General Course Information

Course Information

Course Name Data Analysis (SS3850G)

Lecture Hours Monday, Wednesday, Friday 4:30 PM – 5:30 PM, WSC-240

List of Prerequisites

SS2858A/B: A minimum mark of 60% in Statistical Sciences 2858A/B.

Anti-requisites: The former Statistical Sciences 3814A/B.

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

Hyukjun (Jay) Gweon

Office: WSC 270

E-mail: hgweon@uwo.ca

Phone: 519-661-2111 ext 87792

Office hours: MWF 3:30 PM – 4:30 PM

3. Course Description/Syllabus

This course covers topics in related to statistical learning such as linear regression, logistic regression, discriminant analysis, model selection and regularization, cross validation, tree-based methods and clustering.

4. Course Materials

Textbook: An Introduction to Statistical Learning --with applications in R, by Gareth James, Daniela Witten, Trevor Hastie and Robert Tibshirani, Springer; 2013 edition. This course aim to cover **chapters**

1-8, and 10 if time allows. The pdf file of the book is available at: <http://www-bcf.usc.edu/~gareth/ISL/>

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.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (4)	30%
Quizzes (2)	40%
Final Project	30%

Assignments

There will be four assignments. Homework will be uploaded to OWL. No late homework will be accepted for grading and missed homework will be a zero mark.

Note: You will need to use R to solve many of the homework questions. You are required to submit all R codes with the answers. **Do not copy** someone else's codes for your answers.

Quizzes

Two "in class" (50-minute) quizzes will be given. The dates of the quizzes are:

- **Feb 15**
- **Apr 8**

Each quiz will be worth **20%** of your final grade. The topics for each quiz will be announced later.

Final Project

For the final data analysis project, you must work individually. Each student is required to write a report of your analysis. You may use any dataset of your choice. Two common open sources of data are

- UCI machine learning repository: <http://archive.ics.uci.edu/ml/index.php>
- Kaggle: <https://www.kaggle.com/datasets>

The details regarding the final project will be announced later.

6. 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. 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 medical illness policy at http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf.

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).

7. 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 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.

No electronic devices are permitted on quizzes or any tests.

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

8. 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 Student Accessibility Services (SAS) at 661-2147 if you have any questions regarding accommodations.

The policy on Accommodation for Students with Disabilities can be found here:
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
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>.