**STAT 400-101/DATA 500/DATA 419A**

**Statistical Communication and Consulting**

**W2021 – T-2**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Instructor:** Lengyi Han **E-mail:**  lengyi.han@ubc.ca

**Classroom Schedule:**  Friday 14:00-17:00

**Location:** On-line Canvas

**Office Hours:** Friday 17:00-18:00 or by Appointment

**Course Website:** Canvas

**Materials Required**

**Textbook:** A handbook of Statistical Analyses Using R, 3rd edition (2014), by Torsten Hothorn and Brian S. Everitt. (You can find the electronic version online)

**Software:** R or R Studio and Latex or Markdown.

**Homepage:** [https://www.r-project.org](https://www.r-project.org/)[, h](https://www.rstudio.com/)ttps://www.rstudio.com and

**Download page:** [https://cran.r-project.org](https://cran.r-project.org/)[,](https://www.rstudio.com/products/rstudio/download/)

<https://www.rstudio.com/products/rstudio/download/>

All Statistical analysis or exploratory data analysis must be done in R or R Studio.

# Tentative Course Schedule and Textbook Coverage

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Week | Lec | Date | Topic | A/Sync | Assgn | Book Sections |
| 1 | 1 | 22/01/14 | Discussion and review of the procedure of consulting | Sync |  | Notes |
| 2 | 2 | 22/01/21 | Review R language (Chapter 2) and report (supplementary notes) | Sync | A1 | Chapter 1 & 2  templatein tex file |
| 3 | 3 | 22/01/28 | Simple inference | Sync | A2 | Chapter 3 |
| 4 | 4 | 22/02/04 | Conditional inference | Sync | A3 | Chapter 4 |
| 5 | 5 | 22/02/11 | Analysis of Variance (ANOVA) | Sync | A4 | Chapter 5 |
| 6 | 6 | 22/02/18 | Simple linear regression | Sync | A5 | Chapter 6 |
| 7 | 7 | 22/02/25 | **Midterm Break** |  |  |  |
| 8 | 8 | 22/03/04 | Multiple linear regression | Sync | A6 | Chapter 6 & 7 |
| 9 | 9 | 22/03/11 | Generalized linear regression | Sync | A7 | Chapter 7 |
| 10 | 10 | 22/03/18 | Recursive Partitioning | Sync | A8 | Chapter 9 |
| 11 | 11 | 22/03/25 | Survival Analysis | Sync | A9 | Chapter 11 |
| 12 | 12 | 22/04/01 | Review | Sync |  |  |
| 13 | 13 | 22/04/08 | Review | Sync |  |  |

**Grading Practices**

Faculties, departments, and schools reserve the right to scale grades in order to maintain equity among sections and conformity to University, faculty, department, or school norms. Students should therefore note that an unofficial grade given by an instructor might be changed by the faculty, department, or school. Grades are not official until they appear on a student's academic record.

<http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,41,90,1014>

**Final Examinations**

The examination period for **W20201 T-2 is April 12 - 27, 2022**.  Except in the case of examination clashes and hardships (three or more formal examinations scheduled within a 24-hour period) or unforeseen events, students will be permitted to apply for out-of-time final examinations only if they are representing the University, the province, or the country in a competition or performance; serving in the Canadian military; observing a religious rite; working to support themselves or their family; or caring for a family member.  Unforeseen events include (but may not be limited to) the following: ill health or other personal challenges that arise during a term and changes in the requirements of an ongoing job.

Further information on **Academic Concession** can be found under **Policies and Regulation in the *Okanagan Academic Calendar***<http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,48,0,0>