

## STAT\*2090 : Introductory Applied Statistics II

### Course Outline

**Instructor:** Ayesha Ali                      **Email:** aali@uoguelph.ca  
**Office:** MACN 509                              **Phone:** Ext. 53896

**Office/Computer Lab Hours:**

Tu Th 10:30 – 12:20pm in SSC 1303  
Wed. 1:15 – 2:15pm (subject to change)

**Lectures:** MWF 4:30 – 5:20pm ALEX 200

**Calendar Description:** The topics covered in this course include: analysis of qualitative data; analysis of variance for designed experiments; multiple regression; exposure to non-parametric methods; power and sample size calculations; special topics such as logistic regression. Examples come from a variety of disciplines, including nutrition, family studies, education, marketing, medicine, psychology and sociology.

**Pre-requisites:** STAT\*2080

**Restrictions:** BIOL\*2250, STAT\*2050, STAT\*2250

**Required Texts:**

*Introduction to the Practice of Statistics*, 9<sup>th</sup> Ed., Moore, McCabe and Craig, Freeman and Company.

**Calculator:** Your calculator should be able to calculate at least one-variable statistics. If you're not sure about your calculator, please just ask me.

**Course Objectives and Outcomes:** This course consolidates the concepts of data analysis, statistical reasoning and statistical inference that were learned in STAT\*2080. It extends these concepts to more complex experimental and sampling designs.

We will work through most of the remainder of the textbook, *Introduction to the Practice of Statistics*, 9th Edition. As you have seen, the textbook emphasizes the use of statistics to help resolve important problems. The answers for the odd-numbered exercises in the text are given at the end of the book. Do as many of these as you feel you need in order to understand the concepts and techniques covered in the course. Solutions for assigned questions will be posted on the Courselink site after the due date.

By the end of the course you should:

- be able to apply the appropriate statistical method for data provided;
- be able to interpret results of statistical analyses;
- be able to develop and make inferences regarding statistical models;
- be able to critically evaluate statistical methods and results reported in the literature;
- understand and use experimental design principles;
- be able to use and understand output from SPSS for basic statistical analyses.

**Course Assessment:**

|   |     |
|---|-----|
| Assignments (8, equally weighted)         | 21% |
| Tests (3, equally weighted, in-class)     | 39% |
| Final Exam (Tues., Apr. 14, 8:30-10:30am) | 40% |

**Schedule of Important Dates:**

|                        |   |
|------------------------|---|
| Fri. Jan. 17           | Assignment 1 due                              |
| Fri. Jan. 24           | Assignment 2 due                              |
| <b>Wed. Jan. 29</b>    | <b>Test 1 (45 minute test, in-class, 13%)</b> |
| Fri. Feb. 7            | Assignment 3 due                              |
| Fri. Feb. 14           | Assignment 4 due                              |
| <b>Week of Feb. 17</b> | <b>NO CLASS – Winter Break</b>                |
| <b>Wed. Feb. 26</b>    | <b>Test 2 (45 minute test, in-class, 13%)</b> |
| Fri. Mar. 6            | Assignment 5 due                              |
| Fri. Mar. 13           | Assignment 6 due                              |
| Fri. Mar. 20           | Assignment 7 due                              |
| <b>Wed. Mar. 25</b>    | <b>Test 3 (45 minute test, in-class, 13%)</b> |
| Fri. Apr. 3            | Assignment 8 due                              |
| <b>Tues. Apr. 14</b>   | <b>FINAL EXAM 8:30 – 10:30, room TBA</b>      |

**NOTE:** You should have NO conflicts concerning these dates and times. If you do it is your responsibility to resolve them as soon as possible.

**IMPORTANT:** Assignment marks will NOT count toward your final grade if you fail all 3 tests and the final exam.

**Teaching Assistants:**

Angelica Amores  
Alysha Cooper  
Kim Gotera  
Kayla Vanderkruk

**Assignments:** The assignments support and supplement the lectures. Working through examples and assigned problems is the key to success in the course. You are responsible for doing your own work. It is definitely beneficial to work with others but getting another student to do your assignment for you is academic misconduct.

We will be using the Courselink site for assignment distribution and for assignment answer submission. You can get access by going to <http://courselink.uoguelph.ca/> and then you log in using your university account login and password (the one you use for Gryph Mail). Assignments will be made available to you via pdf files on the STAT\*2090 Courselink site. You will be required to submit assignment responses via the appropriate assignment “quiz” on the Courselink site by a specified due date and time. You will be able to have unlimited attempts when entering your answers until the time that the assignment is due. Your final attempt is the one that will be graded and will count toward your final assignment grade. Remember to save your answers right after you enter them and then finally submit the quiz at some time prior to the time that the assignment is due. There will be plenty of time to do the assignments and to submit your answers so the only legitimate reason for a late assignment would be a campus-wide failure of the Courselink system that I will definitely be aware of and that I will take into account since it will affect the entire STAT\*2090 class. **The bottom line is that if you don’t fill in, save, and submit your**

**assignment answers before the due date and time, you will receive a mark of zero for that assignment.**

To account for some reasonable excuse for non-submission of or poor performance on an assignment, I will discard your worst assignment mark when computing your final assignment grade. All assignment marks are of equal weight when I compute your final assignment grade.

### **Email Communication**

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

### **When You Cannot Meet a Course Requirement**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

### **Drop Date**

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

### **Copies of Out-of-class Assignments**

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

### **Accessibility**

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the

University and the student. When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website  
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website  
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

### **Academic Integrity**

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community—faculty, staff, and students—to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

### **Recording of Materials**

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

### **Resources**

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>