

PSYC08 - Advanced Data Analysis in Psychology

Summer 2018

Instructor: Dr. Douglas A. Bors

Office Hours: Wednesdays 11:00 to 12:30, after class, and by appointment.

Room: SW128

Textbook: *Data Analysis for the Social Sciences* by Douglas Bors

Grading: Your final grade in the course will be based on assignments (10%), two mid-term examinations (20% and 30%, respectively), and a final examination (40%). There will be at least five assignments during the term. Your best four performances will be used for the assignment portion of your grade. The date for the mid-terms will be posted and announced early in the term. The date for the final examination will be published by the registrar's office sometime during the term.

Make-Ups: Make-up assignments are not given. Make-up mid-terms are never given without a legitimate reason (see below). Make-up mid-terms will be given at 5:00 pm on the Tuesday of the week following the original date of the mid-term exam. On the date of the make-up, the location of the exam will be posted on this page and on Dr. Bors' office door. If the make-up is also missed for legitimate reasons, a grade will be assigned on the basis of the student's relative performance on the other assessment. Make-ups for final examinations are entirely at the discretion of the registrar's office.

Missed Term Work due to Medical Illness or Other Emergency:

All students citing a documented reason for missed term work must bring their documentation to the Psychology Course Coordinator in SW427C **within three (3) business days** of the assignment due date. You must bring the following:

- (1.) A completed [Request for Missed Term Work form](http://uoft.me/PSY-MTW) (<http://uoft.me/PSY-MTW>), and
- (2.) Appropriate documentation to verify your illness or emergency, as described below.

Appropriate Documentation:

In the case of missed term work due to **illness**, only an **original copy** of the official [UTSC Verification of Illness Form](http://uoft.me/UTSC-Verification-Of-Illness-Form) will be accepted (<http://uoft.me/UTSC-Verification-Of-Illness-Form>). Forms are to be **completed in full**, clearly indicating the start date, anticipated end date, and severity of illness. The physician's registration number and business stamp are required.

In the case of **medical emergency**, an original copy of the record of visitation to a hospital emergency room should be provided.

In the case of a **death of a family member**, a copy of a death certificate should be provided.

In the case of a **disability-related** concern, an email communication should be sent directly to the Course Coordinator (psychology-undergraduate@utsc.utoronto.ca) from your Disability Consultant at AccessAbility Services, detailing the accommodations required. The Course Instructor should also be copied on this email.

For U of T **Varsity athletic commitments**, an email communication should be sent directly to the Course Coordinator (psychology-undergraduate@utsc.utoronto.ca) from a coach or varsity administrator, detailing the dates and nature of the commitment. The email should be sent **well in advance** of the missed work.

Documents covering the following situations are **NOT acceptable**: medical prescriptions, anything related to personal travel, weddings/personal/work commitments.

Procedure:

Submit your (1.) [request form](#) and (2.) [medical](#)/other documents in person **within 3 business days** of the missed test or assignment. Forms should be submitted to **SW427C between 9 AM - 4 PM**, Monday through Friday. If you are unable to meet this deadline for some reason, you must contact the Course Coordinator via email (psychology-undergraduate@utsc.utoronto.ca) within the three business day window. Exceptions to the documentation deadline will only be made under exceptional circumstances.

Within approximately one week, you will receive an email response from the Course Instructor / Course Coordinator detailing the accommodations to be made (if any). You are responsible for checking your official U of T email and Blackboard course announcements daily, as accommodations may be time-critical. The Course Instructor reserves the right to decide what accommodations (if any) will be made for the missed work.

Failure to adhere to any aspect of this policy may result in a denial of your request for accommodation.

Note that this policy applies only to missed term work (assignments and midterms). Missed final exams are handled by the Registrar's Office (<http://www.utsc.utoronto.ca/registrar/missing-examination>)

AccessAbility:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services as soon as possible.

AccessAbility Services staff (located in Rm SW302, Science Wing) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations [416-287-7560](tel:416-287-7560) or email ability@utsc.utoronto.ca. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Overview: This course is designed to provide the student with the advanced principles of data analysis for both parametric and non-parametric analyses. In terms of parametric statistics, our treatment will focus on forms of Analysis of Variance (ANOVA). In addition to the material covered in PSYB07, a working knowledge of elementary algebra is assumed.

Tentative Course Outline:

| Week | Topic | Chapters |
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| 1 | Preview and Descriptive Statistics and Graphs | 1 & 2 |
| 2 | Review of PSYB07 tests and brief Introduction to ANOVA | 4, 5, 6, and 7 |
| 3 | Introduction to One-Way ANOVA between-subject designs | 5, 8 |
| 4 | One-Way ANOVA continued, third-variables (ANCOVA), nonparametric alternatives | 5, 8 |
| 5 | Introduction to Related-Subject Designs | 5, 9 |
| 6 | Related-Samples designs continued, | 9 |
| 7 | Related-Samples continued, nonparametric alternatives | 9 |
| 8 | Planned and Unplanned comparisons, per-comparison and family-wise error rates | 10 |
| 9 | Planned and Unplanned comparisons continued | 10 |
| 10 | Introduction to Factorial Designs, Between-Subject designs, Main effects versus Simple Effects | 11 |

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| 11 | Factorial Designs, Fixed versus random factors, Within-Subject designs, Main effects versus Simple Effects | 11 |
| 12 | Mixed Designs and final Integration | 11 |