

STAT 3000 A01
Applied Linear Statistical Models
Fall Term 2012

- Instructor:** Dr. Zeny F. Mateo
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Tel: (204) - 474 6707
- Office Hours:** M & W: 1:30 pm– 2:30 pm Tues 10:00 am – 11:00 a.m. or by appointment
- Calendar Description:** Applied Linear regression and analysis of variance for designed experiments. This course is not for use in the honours or major degree programs in Statistics. Not to be held with stat 3480 (005.347), STAT 3480 (005.348), the former STAT 3120 (005.312) or the former STAT 3130 (005.313).
- Web Page:** For Posting Notes: <https://jump.umanitoba.ca/>
JMP Download : <http://www.stats.umanitoba.ca/download/jmp>
Some information will be posted on the jump website for your convenience. It is not intended to be complete. You will still be responsible for any information/announcement given in the class.
- Textbook:** *Applied Statistics Analysis of Variance and Regression (Third Edition)* by Ruth Mickey, Olive Dunn and Virginia Clark. Wiley 2004. ISBN 978-0-470-57125-5
- Reference:** *Applied Linear Statistical Models with Student CD (Fifth Edition)* by M.H. Kutner, C.J. Nachtsheim, J. Neter and W. Li. McGraw Hill 2004. ISBN 0-07-310874-X
Student Solutions Manual is included in compact disk for use by students. The disc also includes all data set files from the text.
- Computer Package:** Statistical software packages are usually needed to perform the necessary calculations. We will use *JMP 8* which can be downloaded to your computer to complete the assignments.
- Assignments:** There will be **5 assignments during the term.**
Assignments are due at the beginning of class on the day assigned.
All your assignments should be done on 8.5 x 11 paper using **one** side only.
Late assignments **WILL NOT BE ACCEPTED.**

Test and Examination: There will be a Midterm test, tentative date on Thursday, **Nov 01, 2012** during the “class time” period. There will be a 2-hour final exam, which will be scheduled by the student records. It will cover all the lecture materials, but with emphasis on the second half. There will be

NO make-up midterm test. Students who miss the midterm with legitimate /valid reasons will carry the midterm weight (35%) to the final examination making the final examination weight (85%). Selected Formula sheet and relevant Statistical tables will be provided in the Tests and Final Exam if required. A non-programmable calculator is permitted and cell phones and other electronic devices are **strictly prohibited during the examination.**

Course Evaluation:

Assignments:	15%
Term Test:	35%
Final Exam:	50%

Note that regardless of term marks, to obtain a grade of C or better, you must obtain at least 50% on the final examination.

Voluntary Withdrawal: The voluntary withdrawal date is **November 14, 2012** by which time you will have received your marks for the midterm test and probably 3 assignments.

Academic Dishonesty: You are expected to be familiar with what constitutes academic dishonesty and its consequences. Academic dishonesty is a serious offense and can be severe as suspension or expulsion from the University. More details of these terms and related issues are available at:
www.umanitoba.ca/science/undergrad/resources/webdisciplinedocuments.html

Pandemic Advisory: Should major disruptions to university activities occur as a result of a pandemic, the course content, marks breakdown, and other provisions of this document may be adjusted as the circumstances warrant.

Course Contents: (Based on the text chapters)

1. Data Screening
2. One-Way Analysis of Variance
3. Estimation and Simultaneous Inference
4. Nested Design
5. Two Crossed Factors: Fixed Effects and Equal Sample Sizes
6. Randomized Complete Block Design
8. Crossed Factors: Mixed Models
10. Linear Regression: Fixed X Model
11. Linear Regression: Random X Model and Correlation
12. Multiple Regression
14. Miscellaneous Topics in Regression (Optional, if time permits)
15. Analysis of Covariance

2012–2013 REGISTRATION ADVISORY

Important Note from the Dean of Science:

It is your responsibility to ensure that you are entitled to be registered in this course. This means that you have:

- the appropriate prerequisites, as noted in the calendar description, or have permission from the instructor to waive these prerequisites;
- not previously taken, or are concurrently registered in, this course and another that has been identified as “not to be held with” in the course description. For example, STAT 3000 cannot be held for credit with STAT 3120, STAT 3130, STAT 3470 or STAT 3480.

The registration system may have allowed you to register in this course, but it is your responsibility to check. If you are not entitled to be in this course, you will be withdrawn, or the course may not be used in your degree program. There will be no fee adjustment. This is not appeal able. Please be sure to read the course description for this and every course in which you are registered.