

STAT 3000 Section A01

Applied Linear Statistical Models

Time MWF 12:30 – 1:20
Location 115 Armes
CRN: 12213

Instructor Carrie Paquette
335 Machray Hall
Telephone: 474-6040
Email: Carrie.Paquette@UManitoba.CA

Web Pages <http://www.umanitoba.ca/umlearn>:

Office Hours Tuesday/Thursday 1:00–:00
Monday 9:30–10:30
(Or by appointment, please feel free to email me anytime.)

Textbook: *STAT2 Building Models for a World of Data*
by Cannon, Cobb, Et.al. W.H. Freeman and Company. ISBN 1-4641-4826-0

Quizzes: There will *tentatively* be 4 - 50 mins. quizzes all of equal weight.
There are no make-up quizzes.
Tentative quiz dates are: October 2, October 23, November 13 and November 27

Final Exam: There will be a 2-hour final exam, which will be scheduled by student records.
It will cover the entire course with emphasis post-midterm.

Course Evaluation: Quizzes: 50%
Final Exam: 50%

VW date: November 18, 2015 by which time you will have received your marks for three quizzes.

Course Topics

- Linear Regression
 - Review of the Simple Linear Regression
 - Assessing Conditions
 - Transformations
- Inference for Simple Linear Regression
 - Inference for regression slope
 - ANOVA for regression
 - Regression and correlation
 - Intervals for predictions
- Multiple Regression
 - Multiple linear regression model
 - Assessing the model
 - New predictors from old
 - Techniques for choosing predictors
- Analysis of Variance
 - One-Way ANOVA
 - Assessing and using the model
 - Scope of Inference
 - Fisher's LSD
- Multifactor ANOVA
 - Main effects model
 - Interaction in the Two-Way model
- Overview of Experimental Design
 - Comparisons and Randomizations
 - Randomization F-test
 - Blocking
 - Factorial Crossing

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