McMaster University Department of Mathematics and Statistics Stats 752 – Design of Experiments

Instructor: **Aaron Childs** Office: Hamilton Hall 213 E-mail: childsa@mcmaster.ca

Office Hours: Monday 9:30am to 10:20am, Wednesday 9:30am to 10:20am,

Thursday 11:30am to 12:20pm, Friday 12:30pm to 1:20pm

COURSE INFORMATION

Lectures: Tuesday 11:30am-12:45pm, Wednesday 1:15pm-2:30pm in HH/207

Topics Covered: Distribution of quadratic forms; full rank regression; generalized inverses and

> estimable functions; models not of full rank; unbalanced one-way and nested classifications; unbalanced two-way crossed classification; factorial designs;

analysis of covariance; generalized linear models.

Textbooks: **Optional:**

Linear Models by Searle, Wiley.

An Introduction to Generalized Linear Models, Third Edition by Dobson,

Chapman & Hall.

Applied Regression Analysis, Third Edition by Draper and Smith, Wiley.

Linear Models in Statistics, by Rencher, Wiley.

Design and Analysis of Experiments, Eighth Edition by Montgomery, Wiley.

Assignments: There will be seven assignments and a take-home exam all due at 12:00noon (in the

lockers next to HH/105), on the following dates:

Assignment #1: Monday, January 13 Assignment #2: Monday, January 27 Assignment #3: Monday, February 10 Assignment #4: Monday, March 3 Assignment #5: Monday March 17 Assignment #6: Monday, March 31 Assignment #7: Monday, April 14 Take-Home Exam: Monday April 28

Course Evaluation: Assignments: 60% Final Exam: 40%

Academic Dishonesty: Academic dishonesty consists of misrepresentation by deception or by other

fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at

http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf

The following illustrates only three forms of academic dishonesty: 1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained. 2. Improper collaboration in group work. 3. Copying or using unauthorized aids in tests and examinations.