

PROSEMINAR ON ADVANCED STATISTICS

FALL 2016

CRJ 719 - 1001

COURSE	CRJ 719 - 1001, Class Number: 88870
TITLE	Proseminar on Advanced Statistics
CLASS SCHEDULE	4:00 pm – 6:45 pm, Thursday
CLASS LOCATION	Carol C. Harter Classroom Building Complex C321
CREDIT	3 Credit Hours
FACULTY	
OFFICE PHONE	
OFFICE LOCATION	
OFFICE HOUR	2:30 pm - 4:00 pm Monday through Thursday, or by appointment
EMAIL	Your email will be responded within 24 hours.

RECOMMENDED TEXTBOOK

Geiser, C. (2012). *Data Analysis with Mplus (Methodology in the Social Sciences)*. New York, NY: The Guilford Press

OTHER REQUIRED MATERIALS

The instructor will also make use of materials and information outside of the textbook. All additional materials will be given through the Webcampus system and students will be held responsible for preparing all assigned readings, class notes, and handouts.

COURSE DESCRIPTION

Overview of advanced statistical models such as Generalized Linear Model (Poisson, Negative binomial), Multilevel Models (Hierarchical Linear/Nonlinear Models), and Structural Equation Models. Introduction to advanced data analysis using STATA and M-plus programs. Application of advanced statistical methods to diverse secondary data. Prerequisite: Graduate standing in criminal justice or consent of instructor, and satisfactory completion of CMJ 703

COURSE LEARNING OUTCOMES

Through experiencing analyses of real data with applying diverse advanced statistical models, students should be familiar with advanced statistical methods which are frequently introduced in the social and behavioral science fields. Students will also learn how to use advanced statistical programs including STATA program. More specifically, students will learn;

- (1) Generalized Linear Models
- (2) Hierarchical Linear and Nonlinear Models
- (3) Structural Equation Model
- (4) Data Analysis with STATA and M-plus programs

REQUIREMENTS AND GRADE

Your grade will be decided based on four things;

- (1) **Four Team-based Lab (TBL) projects (5 X 4 = 20 points):** In this class, you will have four in-classroom team-based lab projects on the designated dates. They are designed to make you practice corresponding topics with your team members.
- (2) **Four Research Assignments (5 x 4 = 20 points):** Four research assignments will be given during the class. They are take-home individual research assignments. Detailed information on this assignment will be given during the course.
- (3) **Research Project (10 x 2 = 20 points):** One research project will be given during the class. It is an application of statistical models to the given secondary data sets. You can select your own data. You should write the methodology section based on the typical research article format. Detailed information on this assignment will be given during the course.
- (4) **Mid-term exam (20 points):** Mid-term exam will be administered based on materials covered in the lectures and readings. It is an in-classroom exam and composed of multiple-choice, short-answer, and essay questions.
- (5) **Final exam (20 points):** Final exam will cover all the materials studied in the whole class. It is also an in-classroom exam and composed of multiple-choice, short-answer, and essay questions.

For the assignment of final letter grades for this course, the following grading scale will be used.

94.00% - 100.00%:	A
90.00% - 93.99%:	A-
87.00% - 89.99%:	B+
83.00% - 86.99%:	B
80.00% - 82.99%:	B-
77.00% - 79.99%:	C+
73.00% - 76.99%:	C
70.00% - 72.99%:	C-
67.00% - 69.99%:	D+
60.00% - 66.99%:	D
below 59.99% :	F

ATTENDANCE AND MAKE-UP EXAM POLICIES

Attendance is mandatory. Students are responsible for all materials covered on days they are absent. If you miss any quiz or exam, you will lose the score for that quiz or exam. Make-up exams/quizzes will not be offered, except under extreme, documentable emergencies. If you must miss any class, notify me within 24 hours of missing and provide documentation of the emergency.

SYLLABUS

The instructor reserves the right to make changes to the course syllabus at any time during the semester. If changes are made, information regarding the changes will be conveyed to students in class and will also be posted on WebCampus.

ECDs

Please turn off or “mute” all Electronic Communication Devices (ECDs) such as cell phones, pagers, etc. before coming to class. Audio recording of the course lectures is allowed; however, you should get permission if you would share with other people. Other electric devices for class notes and calculations are allowable in this class as long as they do not cause any trouble to other students.

ACADEMIC MISCONDUCT

Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV’s function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <https://www.unlv.edu/studentconduct/student-conduct>.

COPYRIGHT

The University requires all members of the University Community to familiarize themselves with and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>.

DISABILITY RESOURCE CENTER

The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895- 0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

RELIGIOUS HOLIDAYS POLICY

Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The makeup will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor within the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or within the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

TRANSPARENCY IN LEARNING AND TEACHING

The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information:

- <https://www.unlv.edu/provost/teachingandlearning>
- <https://www.unlv.edu/provost/transparency>

University Library

Students may consult with a librarian on research needs. For this class, the subject librarian is Susie Skarl (https://www.library.unlv.edu/contact/librarians_by_subject). UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at <https://www.library.unlv.edu/>.

INCOMPLETE GRADES

The grade of I—Incomplete—can be granted when a student has satisfactorily completed threefourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

TUTORING AND COACHING

The Academic Success Center (ASC) provides tutoring, academic success coaching and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, visit <http://www.unlv.edu/asc> or call 702-895- 3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.

UNLV WRITING CENTER

One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>.

REBELMAIL

By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official email system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. Emailing within WebCampus is acceptable.

FINAL EXAMINATION

The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. In this class, the final exam will be held **from 6 pm to 8 pm on Dec 15th**

COURSE SCHEDULE

Week	Dates	Subjects	Assignment
Week 1	September 1	Introduction to Advanced Statistics	
Week 2	September 8	Overview of Mathematical Statistics	
Week 3	September 15	Overview of Regression and Inference	Research Assignment 1
Week 4	September 22	Analysis of Fixed and Random Effects	
Week 5	September 29	TBL Session One	Research Assignment 2
Week 6	October 6	Generalized Linear Models	
Week 7	October 13	TBL Session Two	Research Assignment 3
Week 8	October 20	Mid-Term Exam	
Week 9	October 27	Introduction to Multilevel Analysis	
Week 10	November 3	Hierarchical Linear Model	
Week 11	November 10	TBL Session Three	Research Assignment 4
Week 12	November 17	Research Project: NO CLASS	
Week 13	November 24	Thanksgiving: NO CLASS	
Week 14	December 1	Structural Equation Modeling	
Week 15	December 8	TBL Session Four	Research Project Due
Week 16	December 15 6 – 8 pm	Final Exam	