Instructor: Ilya Zaliapin  Office: Davidson Math & Science (DMS), Room 221  
Office hours: TR 2:30–4:00PM + by appointment  
Phone: (775) 784-6077  E-mail: zal@unr.edu  
Course web page: http://unr.edu/~zal/STAT755_Spring2013.htm


Required textbook:

Tentative list of topics (may change slightly as class proceeds):
- Matrix Algebra and Random Vectors
- Sample Geometry and Random Sampling
- Multivariate Normal Distribution
- Multivariate Linear Regression
- Principal Components
- Factor Analysis
- Canonical Correlations
- Discrimination and Classification
- Cluster analysis

Home works will be assigned weekly; they are not graded and intended solely for midterm preparation. You are encouraged to discuss HW assignments between each other and with instructor during office hours.

Quizzes: There will be occasional pop quizzes that contribute to 5% of your overall performance.

Statistical Lab is an integral part of the course. The class will meet in a computer lab approximately every second week to learn/discuss applied statistical techniques using the package R (a free open-source version of S-plus). Take-home lab assignments will require application of statistical techniques to real or synthetic data sets. The results should be presented in a form of illustrated reports (we will discuss the report writing in the class). Previous knowledge of R is not required. The R portal with downloads, manuals, FAQs, and much more is located at: http://www.r-project.org/. You are encouraged to discuss the Lab assignments and can do them in groups, but your reports have to be written individually and demonstrate that you are able to perform the presented analysis independently. You may use any other statistical package if you like, but all instructions and discussions in the class will refer only to R.

Midterms: There will be two midterms: Tuesday, February 26 and Tuesday, April 16
**Final exam:** A comprehensive final exam will be given on Thursday, May 9, 8:00-10:00AM

**Grading policy:** Your letter grade (which may include + or −) for the course will be based on Statistical Lab reports (30% altogether), two midterms (15% each), final exam (40%), and quizzes (5%).

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<th>Letter</th>
<th>A</th>
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<th>B+</th>
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<th>B-</th>
<th>C+</th>
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<tr>
<td>Min. Score</td>
<td>93%</td>
<td>90%</td>
<td>87%</td>
<td>83%</td>
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**Prerequisites:** MATH 330, MATH 461, Co-requisite: STAT 452.

**Academic dishonesty statement:** Any form of academic dishonesty will not be tolerated in this class. The minimum penalty for academic dishonesty is an F in the course. See Student Handbook and UNR Catalog for rules about and sanctions for academic dishonesty: [http://www.cis.unr.edu/ecatalog/Default.aspx?article_list_id=11076](http://www.cis.unr.edu/ecatalog/Default.aspx?article_list_id=11076)

**Disability statement:** The Department of Mathematics and Statistics supports providing equal access for students with disabilities. Any student needing accommodations for a specific disability is encouraged to meet with instructor or any Department representative at your earliest convenience to ensure timely and appropriate accommodations.

**Class recording policy:** Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.