Spring 2007
Probability and Statistics (MATH/STAT 352) 3 credits
William J. Raggio Building (WRB) Room 2003
TR 4:00-5:15PM

Instructor: Ilya Zaliapin  Office: Ansari Business Bldg., Room 609
Office hours: Mon 10:00-noon and Wed 10:00-noon + 1:00-2:00PM
Phone: (775) 784-6077  E-mail: zal@unr.edu

TA: Pawinee Buntha  Office: Ansari Business Bldg., Room 618
Office hours: Fri 10:00-11:30AM
Phone: (775) 784-4446  E-mail: p_buntha@hotmail.com

Course web page: http://unr.edu/homepage/zal/STAT352.htm

Intro: The use of probability models and statistical methods for data analysis has become common practice in virtually all scientific disciplines. This course provides an introduction to the theory and practice of probability and statistics emphasizing their language, essential ideas, and concepts. We will discuss the foundations of probability theory, basic description statistics, graphical representation of data, point and interval estimation, hypothesis testing, correlation and regression analyses. The course is data- and computer-oriented. Working with a statistical package MINITAB will give you an opportunity to see how the concepts discussed in the class are applied to the real data sets.

Required textbook:

Required statistical package:
• MINITAB – available in the Math Center (AB610) free of charge. You can borrow it for $30 per 5 month at www.minitab.com. The package will be required for selected homeworks.

Required scientific calculator:
• A calculator that will add, subtract, multiply, divide, compute factorials, and raise numbers to powers is required for the course. You do not need built-in statistical functions. You may not use your cell phone or PDA for calculations. The Math Center might be able to provide you with a calculator if you do not own and do not want to buy one.

Tentative list of topics:
• Probability experiments
• Random events, sample spaces
• Random variables, discrete and continuous distributions
• Quantitative measures of location and variability
• Exploratory data analysis, statistical plots
• Point and interval estimation
• Hypothesis testing
• Correlation analysis, Linear regression
**Grading:** Your letter grade is determined by the score accumulated during semester:

<table>
<thead>
<tr>
<th>Letter</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D+</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. Score</td>
<td>93%</td>
<td>90%</td>
<td>87%</td>
<td>83%</td>
<td>80%</td>
<td>77%</td>
<td>73%</td>
<td>70%</td>
<td>67%</td>
<td>63%</td>
</tr>
</tbody>
</table>

*How to calculate the score:*

- **Before Thursday, May 3** the score is calculated as follows:
  - Homeworks (40%), Midterms (2x30%=60%), Quizzes (extra 2%)

If on Thursday, May 3 your score corresponds to any letter grade higher or equal to B, you can request this letter grade and do not attend the final exam. At the same time, you still have a right to attend the final; in this case, your score will be calculated as described below and only that score will be used to determine the letter grade (you **may not** go to final and then request to use your pre-final score). If on May 3 your score is below 83%, you must attend the final.

- **After the final,** the score is calculated as follows:
  - Homeworks (20%), Midterms (2x20%=40%), Final (40%), Quizzes (extra 2%).

**Midterms:** There will be two midterms scheduled tentatively on Thursday, March 1 and Tuesday, April 19.

**Final exam** will be given on Thursday, May 10, 2007 4:30 – 6:30 PM.

**Exam policy (for midterms and final):** Closed notes, closed books. A cheat sheet prepared by you will be allowed. Calculator is required on exams. There will be no make-ups for exams, except legitimate medical reasons. In case of participating in University-related activities or in force-majeure circumstances, contact instructor in advance.

**Re-grading:** If you found that your grade was calculated incorrectly, contact instructor in person or in writing with a rational justification. You have one week after a grade is announced to appeal it. The final decision about new grade is made by the instructor.

**Home works** will be given and graded weekly. You are encouraged to discuss HW assignments between each other, with TA, and with instructor during office hours; but your work must be written individually. To get the HW credit, the assignment is due by the end of Tuesday lecture. A late home work results in zero score. Your written HW assignment must be returned to instructor (e-mails with HW will not be accepted).

**Quizzes:** There will be occasional pop quizzes intended to help us in choosing the right course pace. You **will not** lower your grade by failing at quizzes, but you can improve your grade by doing them right. Quizzes contribute 2% of your overall performance, and may be crucial when evaluating borderline performance.

**Attendance** is strongly suggested but not required. However, you are fully responsible for the material covered and the announcements made in class.

**Recitation sections** will be held by a TA three times a week: Mon 10:00-11:00 in AB212, Wed 11:00-Noon in AB108 and Fri Noon-1:00 PM in AB101. The sections are optional but strongly recommended. You will need to sign up for one section.

**Course Web site** will be maintained at [http://unr.edu/homepage/zal/STAT352.htm](http://unr.edu/homepage/zal/STAT352.htm)
It will show the course progress, post homework assignments and important announcements. You are responsible for being familiar with the site content. Also, you will need to check your UNR e-mail, which will be used for communication between instructor and students. It will be not possible to request instructor to contact you at alternative e-mail.

**Prerequisites:** two semesters of calculus.

**Classroom Policy:** Any successful learning experience requires mutual respect on behalf of the student and the instructor. In particular, it is assumed that we are coming to the class for the total duration of a lecture. Should there be a need to come later or leave earlier, choose a seat closest to the door. Switch phones to silent mode. No food or drinks.

**Academic dishonesty** will not be tolerated and will lead to an F grade. See [http://www.unr.edu/stsv/acdispol.html](http://www.unr.edu/stsv/acdispol.html)

**Important dates:**
Wed, Jan 31, 2007: Final date for late registration and paying all tuition and fees (with late registration penalties included). Final date to receive a 100% refund if dropping individual classes or completely withdrawing from the university.
Fri, Mar 16, 2007: Final date to drop a class and receive a 'W'.

See more at [http://www.ss.unr.edu/records/pdf/sched/20071calc.pdf](http://www.ss.unr.edu/records/pdf/sched/20071calc.pdf)

**Tentative schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Tuesdays</th>
<th></th>
<th>Thursdays</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date</td>
<td>Topic</td>
<td>Date</td>
</tr>
<tr>
<td>1</td>
<td>Jan, 23</td>
<td>Intro</td>
<td>Jan, 25</td>
</tr>
<tr>
<td>2</td>
<td>Jan, 30</td>
<td>1.2-1.3</td>
<td>Feb, 1</td>
</tr>
<tr>
<td>3</td>
<td>Feb, 6</td>
<td>2.3</td>
<td>Feb, 8</td>
</tr>
<tr>
<td>4</td>
<td>Feb, 13</td>
<td>2.4</td>
<td>Feb, 15</td>
</tr>
<tr>
<td>5</td>
<td>Feb, 20</td>
<td>2.6</td>
<td>Feb, 22</td>
</tr>
<tr>
<td>6</td>
<td>Feb, 27</td>
<td>Review</td>
<td>Mar, 1</td>
</tr>
<tr>
<td>7</td>
<td>Mar, 6</td>
<td>4.1-4.2</td>
<td>Mar, 8</td>
</tr>
<tr>
<td>8</td>
<td>Mar, 13</td>
<td>4.5</td>
<td>Mar, 15</td>
</tr>
<tr>
<td>9</td>
<td>Spring Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Mar, 27</td>
<td>4.9-4.10</td>
<td>Mar, 29</td>
</tr>
<tr>
<td>11</td>
<td>Apr, 3</td>
<td>5.3-5.4, 5.8</td>
<td>Apr, 5</td>
</tr>
<tr>
<td>12</td>
<td>Apr, 10</td>
<td>6.3-6.4</td>
<td>Apr, 12</td>
</tr>
<tr>
<td>13</td>
<td>Apr, 17</td>
<td>Review</td>
<td>Apr, 19</td>
</tr>
<tr>
<td>14</td>
<td>Apr, 24</td>
<td>6.12-6.13</td>
<td>Apr, 26</td>
</tr>
<tr>
<td>15</td>
<td>May, 1</td>
<td>7.1-7.2</td>
<td>May, 3</td>
</tr>
<tr>
<td>16</td>
<td>May, 8</td>
<td>Review</td>
<td>May, 10</td>
</tr>
</tbody>
</table>

**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.