# Spring 2018 Introduction to Statistics (STAT 152 – 1002) 3 credits

Mackay Science (MS) Room 215 TR 10:30 – 11:45AM

Instructor: Ilya Zaliapin Office: Davidson Math & Science (DMS), Room 221

Office hours: TR 9:00-10:00AM + by appointment Phone: (775) 784-6077 E-mail: zal@unr.edu

The course website is maintained at Pearson | MyLab | Statistics

http://www.pearson.com/mylab

**Intro:** 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. A statistical package StatCrunch will be used to illustrate the concepts discussed in class using real data sets.

# Catalog description:

Descriptive statistics; probability models; statistical estimation and hypothesis testing; linear regression analysis; and special topics. (Depending on the major, students must also achieve a satisfactory score on a placement examination to receive Core credit. This course will fulfill the Core Mathematics requirement for major programs that accept MATH 120.)

**Prerequisites:** ACT score of 27 or SAT score of 610 or revised SAT score of 630 or MATH 126 with a "C-" or better. Credit may not be received for STAT 152 if credit has already been awarded for STAT 352 and above.

# Course Access: Pearson MyLab & Mastering

- All students must sign up for Pearson's MyStatLab. Online Access Codes for MyStatLab are available at the ASUN bookstore as well as online at http://www.pearsonmylabandmastering.com.
- The homework will be done online via MyStatLab. Real time access to the grade book is available online as well. An e-version of the required textbook is available through MyStatLab. A hard copy of the book is optional.
- The course id required to sign up on MyStatLab is zaliapin31213

#### Required textbook

• Essentials of Statistics (5th Edition) by Mario F. Triola

# Student Learning Outcomes: Students will be able to...

- Compute descriptive statistics and probabilities from data, using the application of correct statistical notation and language, as well as clearly explaining the reasoning they applied.
- Choose and apply an appropriate statistical analysis or modeling methods to solve problems arising in different research fields.
- Critically read and interpret a wide range of information from a variety of disciplines.

#### Statistical software

- We will be using StatCrunch, a statistical software bundled with the text in Pearson's MyStatLab.
- Notice that the book includes data instructions and displays for data analysis from StatCrunch, Excel, MINITAB and TI-83/84 Plus calculators

**Calculator:** A calculator that can add, subtract, multiply, and divide is required for the course. We will not use any statistical or graphical calculator features.

#### Required Work:

# Midterms (15% each, 45% total)

• There will be three midterms scheduled tentatively on <u>Thursday</u>, <u>February 22</u>, <u>Thursday</u>, <u>March 29</u> and <u>Thursday</u>, <u>April 19</u>. There will be a review session before each midterm.

### Final exam (25%)

- A comprehensive final exam will be given on Tuesday, May 15, 9:50-11:50AM.
- Exam policy (for midterms and final): Closed books, closed notes. A calculator is required on exams. There will be **no make-ups** for exams, except legitimate and documented reasons. In case of participating in University-related activities or in any other special circumstances, contact instructor **in advance**. If you miss one midterm for a documented legitimate reason (doctor's note, University activity, etc.), your final will cost 45%. If you miss more than one midterm for a legitimate reason discuss arrangements with instructor.

# Home works (20%)

- There will be approximately 2 weakly homework assignments.
- All homework assignments are to be completed via MyStatLab.
- No late homework will be accepted. At the end of the semester, the three worst grades for homework will be dropped.

# Quizzes (10%)

• Quizzes (pen and paper) will be given during discussion sessions. Generally, material for the quizzes will be the current week's lecture/homework material. At the end of the semester, the three worst grades for quizzes will be dropped.

**Extra Points** will be given for extra problems announced during the lectures.

**Grading:** Your letter grade is determined by the score accumulated during semester:

| Letter     | Α   | A-  | B+  | В   | B-  | C+  | C   | D+  | D   |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Min. Score | 93% | 90% | 87% | 83% | 80% | 77% | 70% | 67% | 60% |

**Re-grading:** If you find that your grade for exam, HW, or quiz is incorrect, contact instructor with a rational justification. All re-grading requests must be submitted to instructor within <u>one week</u> after a grade is announced; late requests will not be granted. The final decision about the new grade is made by the instructor.

**Lecture attendance** is strongly encouraged but not required. It is your responsibility to know the material covered and announcements made in class.

**Recitation attendance** is required. Graded weekly quizzes are given during the recitation sessions.

**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.

Class Absence Policy: It is the personal responsibility of the student to consult with the instructor regarding absence from class. Students are responsible for material covered in class, and it is the student's responsibility to arrange for the completion of all missed classroom work. University-approved extracurricular activities are defined as those sanctioned by a college dean and/or the provost, and may include, but are not limited to, intercollegiate athletics, band, drama, forensics, and recruitment. It is the responsibility of the student to arrange for written notice from the appropriate college dean or the Office of the Provost to their instructor of their participation in official University activities in advance and as soon as the student is aware of the potential need to miss class. In cases of absences due to extended illness, family emergency, bereavement, or other compelling reason, students should notify their instructors as soon as possible and within one week of the start of the absence, and work with them to develop plans, including appropriate deadlines, to make up missed coursework. Faculty have the right to request formal, written documentation in such cases as appropriate. For university policy regarding class absence, see UAM 3,020.

**Academic Success Services:** Your student fees cover usage of the Math Center (784-4433, <a href="http://www.unr.edu/math-center">http://www.unr.edu/math-center</a>), Tutoring Center (784-6801, <a href="http://www.unr.edu/tutoring">http://www.unr.edu/tutoring</a>), and University Writing Center (784-6030, <a href="http://www.unr.edu/writing\_center">http://www.unr.edu/writing\_center</a>). These centers support your classroom learning; it is your responsibility to take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student.

**Academic Dishonesty** will not be tolerated and will lead to an F grade. Academic dishonesty is defined as: cheating, plagiarism or otherwise obtaining grades under false pretenses. Plagiarism is defined as submitting the language, ideas, thoughts or work of another as one's own; or assisting in the act of plagiarism by allowing one's work to be used in this fashion. Cheating is defined as (l) obtaining or providing unauthorized information during an examination through verbal, visual or unauthorized use of books, notes, text and other materials; (2) obtaining or providing information concerning all or part of an examination prior to that examination; (3) taking an examination for another student, or arranging for another person to take an exam in one's place; (4) altering or changing test answers after submittal for grading, grades after grades have been awarded, or other academic records once these are official.

For more information see <a href="http://www.unr.edu/stsv/acdispol.html">http://www.unr.edu/stsv/acdispol.html</a>

**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.

**Disability Statement:** Any student with a disability needing academic adjustments or accommodations is requested to speak with the <u>Disability Resource Center</u> (Thompson Building, Suite 101) as soon as possible to arrange for appropriate accommodations.

The University of Nevada, Reno is committed to providing a safe learning and work environment for all. If you believe you have experienced discrimination, sexual harassment, sexual assault, domestic/dating violence, or stalking, whether on or off campus, or need information related to immigration concerns, please contact the University's Equal Opportunity & Title IX office at 775-784-1547. Resources and interim measures are available to assist you. For more information, please visit: <a href="https://www.unr.edu/equal-opportunity-title-ix">https://www.unr.edu/equal-opportunity-title-ix</a>.

# Tentative schedule (may vary as course progresses)

| Week | Tuesday |                | ,      | Γhursday     | Friday |              |  |
|------|---------|----------------|--------|--------------|--------|--------------|--|
|      | Date    | Topic          | Date   | Topic        | Date   |              |  |
| 1    | Jan 23  | Intro+Syllabus | Jan 25 | 1.1-1.4      | Jan 26 | Quiz 1       |  |
| 2    | Jan 30  | 2.1-2.4        | Feb 1  | 3.1-3.3      | Feb 2  | Quiz 2       |  |
| 3    | Feb 6   | 3.4            | Feb 8  | 4.1-4.3      | Feb 9  | Quiz 3       |  |
| 4    | Feb 13  | 4.4-4.5        | Feb 15 | 4.6, 4.8     | Feb 16 | Quiz 4       |  |
| 5    | Feb 20  | Review         | Feb 22 | Midterm 1    | Feb 23 | Exam review  |  |
| 6    | Feb 27  | 5.1-5.2        | Mar 1  | 5.3-5.4      | Mar 2  | Quiz 5       |  |
| 7    | Mar 6   | 6.1-6.2        | Mar 8  | 6.3          | Mar 9  | Quiz 6       |  |
| 8    | Mar 13  | 6.4-6.5        | Mar 15 | 6.6-6.7      | Mar 16 | Quiz 7       |  |
| 9    | Mar 20  | Spring Break   | Mar 22 | Spring Break | Mar 23 | Spring Break |  |
| 10   | Mar 27  | Review         | Mar 29 | Midterm 2    | Mar 30 | Exam review  |  |
| 11   | Apr 3   | 7.1-7.3        | Apr 5  | 7.3-7.4      | Apr 6  | Quiz 8       |  |
| 12   | Apr 10  | 8.1-8.2        | Apr 12 | 8.3-8.4      | Apr 13 | Quiz 9       |  |
| 13   | Apr 17  | Review         | Apr 19 | Midterm 3    | Apr 20 | Exam review  |  |
| 14   | Apr 24  | 9.1-9.2        | Apr 26 | 9.3          | Apr 27 | Quiz 10      |  |
| 15   | May 1   | 10.1-10.2      | May 3  | 10.3         | May 4  | Quiz 11      |  |
| 16   | May 8   | Final Review   |        |              |        |              |  |
|      | May 15  | Final Exam     |        | ·            |        |              |  |