MATH 18 BUTTE COLLEGE
INTRO TO STATISTICS SPRING 2016
3 UNITS CTRL # 3327

THIS SYLLABUS WAS UPDATED ON MAY 4, 2016

Instructor: Ivan Zaigralin melikamp@melikamp.com
When emailing, please specify which class you are talking about, and make sure I can see your real name.

Office: LRC 262, MWF 10 am - 11 am, TTh 2:00 pm - 3:00 pm.

Class Meetings: TE 128, TTh 9:30 am - 10:45 am

Required Materials: *Elementary Statistics, 6th edition*, by Larson, Farber. Online portion is not required. An older edition should suffice. The students are responsible for reading every section covered by the course outline at the end of the syllabus.

Catalog Description: The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social sciences, psychology, life science, health science, and education.

Objectives: Upon successful completion of this course, the student will be able to

A. Distinguish among different scales of measurement and their implications.
B. Interpret data displayed in tables and graphically.
C. Apply concepts of sample space and probability.
D. Calculate measures of central tendency and variation for a given data set.
E. Identify the standard methods of obtaining data and identify advantages and disadvantages of each.
F. Calculate the mean and variance of a discrete distribution.
G. Calculate probabilities using normal and student's t-distributions.
H. Distinguish the difference between sample and population distributions and analyze the role played by the Central Limit Theorem.
I. Construct and interpret confidence intervals.
J. Determine and interpret levels of statistical significance including p-values.
K. Interpret the output of a technology-based statistical analysis.
L. Identify the basic concept of hypothesis testing including Type I and II errors.
M. Formulate hypothesis tests involving samples from one and two populations.
N. Select the appropriate technique for testing a hypothesis and interpret the result.
O. Use linear regression and ANOVA analysis for estimation and inference, and interpret the associated statistics.
P. Use appropriate statistical techniques to analyze and interpret applications based on data from disciplines including business, social sciences, psychology, life science, health science, and education.

Attendance: To succeed in this course, it is crucial that you come to class every day, alert and prepared to learn. Roll will be taken at the beginning of each class session. If you arrive after the class has started, please enter the room quietly and get on the roster at the end of the class. If you miss more than a half of a class session, you will be considered absent for that day. If you

miss two or more classes during the first two weeks without notifying me or the department secretary in advance, you will be dropped from the class. **If you miss 4 or more class sessions any time during the semester, you will be dropped from the class.** Exceptions will be made for documented cases of grave illness and/or family emergency.

Homework: Homework serves as practice and will prepare you to do your best on quizzes and tests. No make-up homework will be collected for any reason, but 2 lowest homework scores will be dropped. Homework will be graded for completeness and the amount of detail. **Homework is crucial for learning the material as well as for succeeding in this class.** Doing all homework is probably the most effective way to raise your test grades. You are welcome to work in groups while solving the homework, but you must submit your own work.

Quizzes: There will be 5 quizzes given. No make-up quizzes will be given for any reason. The lowest quiz score will be dropped and the four highest scores together will be worth 10% of the class grade.

Tests: There will be 3 tests. Together they will be worth 60% of the class grade. A makeup test will be given for documented cases of grave illness and/or family emergency.

Final: The final exam will be given on Thursday, May 26, 9:30 am - 11:30 am. It will be worth 20% of the class grade. **You must attend the final in order to pass the class. If you miss the final, then you will get an F for the class.**

Grading:

Letter Grades	
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Grade Breakdown	
Tests	60%
Homework	5%
Participation	5%
Quizzes	10%
Final	20%

Getting Help: If you have a question or a concern not addressed in this syllabus, please contact your instructor via email. Moreover, the campus provides some resources to help you study:
`http://www.butte.edu/currentstudents/help_on_campus/`

Tutoring: The Center for Academic Success (CAS) provides academic support services to Butte College students. It is located inside the Learning Resource Center on main campus and in CHC 230 and 231 at the Chico Center. CAS is open Monday through Thursday, 8:00 a.m. to 5:00, and Friday 8:00 a.m. to 3:00 p.m. on main campus. Hours for CAS at the Chico Center are Tuesday through Thursday, 9:00 a.m. to 2:00 p.m., and Wednesday evening, 6:00 p.m. to 8:30 p.m. Free services include Tutoring, Computer Labs, Workshops, Group Study Rooms on main campus, and TIP Sheets. Students may take a Critical Skills for College Success half-unit course through CAS. For more information, go to
`https://www.butte.edu/cas/`

Cell Phones, Computers: Cell phones are prohibited. The use of computers and tablets will be tolerated during regular class meetings as long as they are completely silent and don't distract

other students. During quizzes, tests, and the final, only approved software/calculators will be allowed (but not required).

Accommodations: If you have a learning disability, a physical disability, or other special needs, please let me know as soon as possible if you need special accommodations (such as extra time for tests). I will do my best to accommodate all needs verified through Disabled Students Programs and Services.

Students have the right to request reasonable modifications to college requirements, services, facilities or programs if their documented disability imposes a functional educational limitation or impedes access to such requirements, services, facilities, or programs. A student with a disability who will be requesting modification, accommodation, or access to an auxiliary aid is required and responsible for identifying himself/herself to the instructor and, if desired, to the Disabled Students Programs and Services (DSPS office). In either event, the student is responsible for providing appropriate documentation of his/her disability. Students who consult or request assistance from the DSPS office regarding specific modifications, accommodations or use of auxiliary aid will be required to meet timelines and procedural requirements established by the DSPS office.

Academic Honesty:

All instances of plagiarism and cheating will result in the score of zero for that homework, quiz, or test, and will be reported to the Dean's Office.

Tentative Outline: Changes will be announced in class.

TUESDAY		THURSDAY	
Jan 26th	**1**	28th **Quiz 1**, 1.1, 1.2	**2**
Feb 2nd 1.3, 2.1	**3**	4th 2.1, 2.2	**4**
9th 2.3	**5**	11th 2.4	**6**
16th 2.5	**7**	18th **Review**,	**8**
23rd **Quiz 2**, 3.1	**9**	25th 3.2	**10**
Mar 1st 3.3	**11**	3rd 3.4	**12**
8th **Review**	**13**	10th **Test 1**	**14**
15th **spring break**		17th **spring break**	
22nd 4.1	**15**	24th 4.2	**16**
29th 4.2	**17**	31st **Review**	**18**
Apr 5th 5.1, 5.2	**19**	7th **Quiz 3**, 5.3	**20**
12th 5.4	**21**	14th **Review**	**22**
19th **Test 2**	**23**	21st 6.1, 6.2	**24**
26th 6.3	**25**	28th **Quiz 4**, 7.1, 7.2	**26**
May 3rd 7.3, 7.4	**27**	5th **Review**	**28**
10th **Test 3**	**29**	12th **no class**	**30**
17th 9.1, 9.2, 9.3	**31**	19th **Review**	**32**
24th **final week**		26th **Final 9:30 - 11:30 am**	