# SYLLABUS - MATH 1070, Section 4, Spring 2018
## Introduction to Statistical Inference

**Instructor:** Jonathan Bown
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**Class Hours:** MW 8:05 AM – 9:25 AM, SW 133

**Office Hours:** MW 9:30 AM – 10:30 AM or by appointment.

**Text:** The Basic Practice of Statistics, by David S. Moore et al., 6th or 7th ed. Homework will be assigned from the 6th edition but there are compatible problems in the 7th edition. Notes and chapter numbers will come from the 6th edition.

**Prerequisite:** Completion, with a grade of C or better, of Math 1010 or Accuplacer CLM score of 50 or better.

**Expected Learning Outcomes:** Upon successful completion of this course, a student should be able to:

- Summarize the data using charts, graphs, histograms, and to calculate basic descriptive statistics like the mean, standard deviation, median and quartiles.
- Work with the normal distribution and use table to find probabilities.
- Understand the difference between correlation and causation.
- Perform regression analysis and compute correlation.
- Understand the Central Limit Theorem and the normality assumption.
- Understand the basics of tests of significance and confidence intervals including z-tests, t-tests, proportion tests, Chi-square tests, ANOVA and non-parametric tests.
- Perform simple statistical analysis of large data sets using spreadsheets (throughout the whole course).

**Grading:** The grades will be calculated as follows:

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| Homework | 20% | A: | 93 - 100 | C-: | 70 - 72 |
| Quizzes | 15 % | A-: | 90 - 92 | D+: | 67 - 69 |
| Exam 1 | 15 % | B+: | 87 - 89 | D: | 63 - 66 |
| Exam 2 | 15 % | B: | 83 - 86 | D-: | 60 - 62 |
| Project | 5 % | B-: | 80 - 82 | E: | 0 - 59 |
| Final Exam | 30 % | C+: | 77 - 79 | | |
| | | C : | 73 - 76 | | |

**Homework:** Homework will be due at the beginning of class at the dates shown on the schedule (subject to change) on canvas. Late homework **will not** be accepted, but two of the lowest assignment scores will be dropped at the end of the semester. Solutions to past

homeworks will be posted promptly after homework is due. The solutions also include problems that were not assigned giving students an opportunity to practice problems out of the book and check answers. (I highly recommend doing this).

**Quizzes:** Weekly quizzes will be given in class on Wednesdays. Makeup quizzes **will not** be given, but two of the lowest quiz scores will be dropped at the end of the semester. Quizzes are designed to cover the material that was assigned as homework due the same day.

**Exams:** Two in-class midterm exams and a final exam will be given (see schedule for dates). All exams, midterms and the final will only be given at the scheduled time. Students are expected to arrange personal work around the announced dates. Please come by and talk to the instructor, ONLY in the event of the most extenuating of circumstances. In the event of extenuating circumstances, students will need to take the exam in the testing center located on the first floor of the Marriott Library. Students are required to inform the instructor at least three days in advance to get necessary materials to the testing center in time. Also be aware that taking exams in the testing center costs five dollars. Requests made within a three day window will be rejected.

**Projects:** Near the end of the semester, students will complete a project using spreadsheet software. For this you may use your own computer, or you may use the lab in the T. Benny Rushing Mathematics Center, Rm 155C, located underground between JWB and LCB. Late projects will not be accepted and given a zero because students will be given over a month to complete it.

**Calculators:** Calculators that do not connect to the internet may be used during quizzes and exams. They are necessary for most quizzes and portions of the exams. Cell phones **may not** be used for this purpose (or any other purpose) during quizzes and exams. Students are responsible for bringing their own calculators to use on exams and quizzes.

**ADA Statement:** The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services (CDS), 162 Olpin Union Building, 581- 5020 (V/TDD). CDS will work with you and me to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to CDS.

**Student Responsibilities:** All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. You have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee: http://regulations.utah.edu/academics/6-400.php