

CS533: Experimental Methods in Computer Science

Spring 2019

This syllabus is under construction.

Last changed on:12/31/2019

1 Course Information

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2 Description

This course explores the design, experimentation, testing, and pitfalls of empirical research in Computer Science. In particular, students will learn how to use a data-driven approach to understand computing phenomena, formulate hypotheses, design computing experiments to test and validate or refute said hypotheses, evaluate and interpret empirical results. Overall, the goal of this

course is to provide the students with the foundations of rigorous empirical research.

2.1 Course Goals

2.2 Course Format

This is a three credit hour course consisting of two 75 minute lectures per week.

2.2.1 Textbooks

2.3 Course Topics and Reading list

3 Policies

3.0.1 Exam Make-ups

There will be a single exam make up time for both the midterm and final exams. The make-up will be on Saturday, May 13th at 8:00am in my office . The make up exam will be different, but at least as difficult, as the regularly scheduled exams.

4 UNM Resources for Students

- Student Health and Counseling (SHAC): 505.277.3136 (24-hr number)
- Online writing support center: <http://caps.unm.edu/services/online-tutoring/online-writing-lab.php>

5 Part 1 Lectures

[Lecture 8: Non-Parametric Tests](#)

6 Part 2 Lectures

[Lecture 1: Scientific Method and Inductive Reasoning](#)

[Lecture 2: Experimental Design](#)

[Lecture 3: Regression Analysis](#)

[Lecture 4: Experimental Computer Science](#)

[Lecture 5: Charts and Plots](#)

[Lecture 6: Analysis of Variance](#)