Syllabus – MICRO 110 Spring 2020

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Lectures: 16h-18h in CO3
Exercises: 18h-19h in computer rooms CO 4-5-6 and 260 (4 rooms) and auditorium CO 3 as a backup.

Examinations:

- There will be two midterm tests, each worth 20% of the course grade. The dates for the tests are as follows (to be held in class. You will need to bring your personal computer):
  - Test 1: March 26
  - Test 2: May 21
- The final examination date will be announced during the semester when available.

The course outline is as follows (outline will be updated as the course progresses, based on pace of course and other scheduling and learning factors):

Topic	Key material

Course Introduction	• Overview of the course
	  o Observing Experiments
	  o Designing efficient experiments
	  o Building models
	• Why do we care about use of statistics?
	  o Observation
	  o Model building
	  o Inference
	• Some examples to consider:
	  o Electronic circuits
	  o Watch mechanisms

Introduction to statistics	• Mean, Median, Mode, Standard Deviation
	• Population Statistics
	  o Graphical Representation
	  o Population distributions
	  o Mean and standard deviation
	  o Sampling

Comparison Statistics	• Blocking and randomization • Replication • Significance tests • Regression and fitting
Design of Experiments	• Factorial design • Fractional factorial design • Analysis