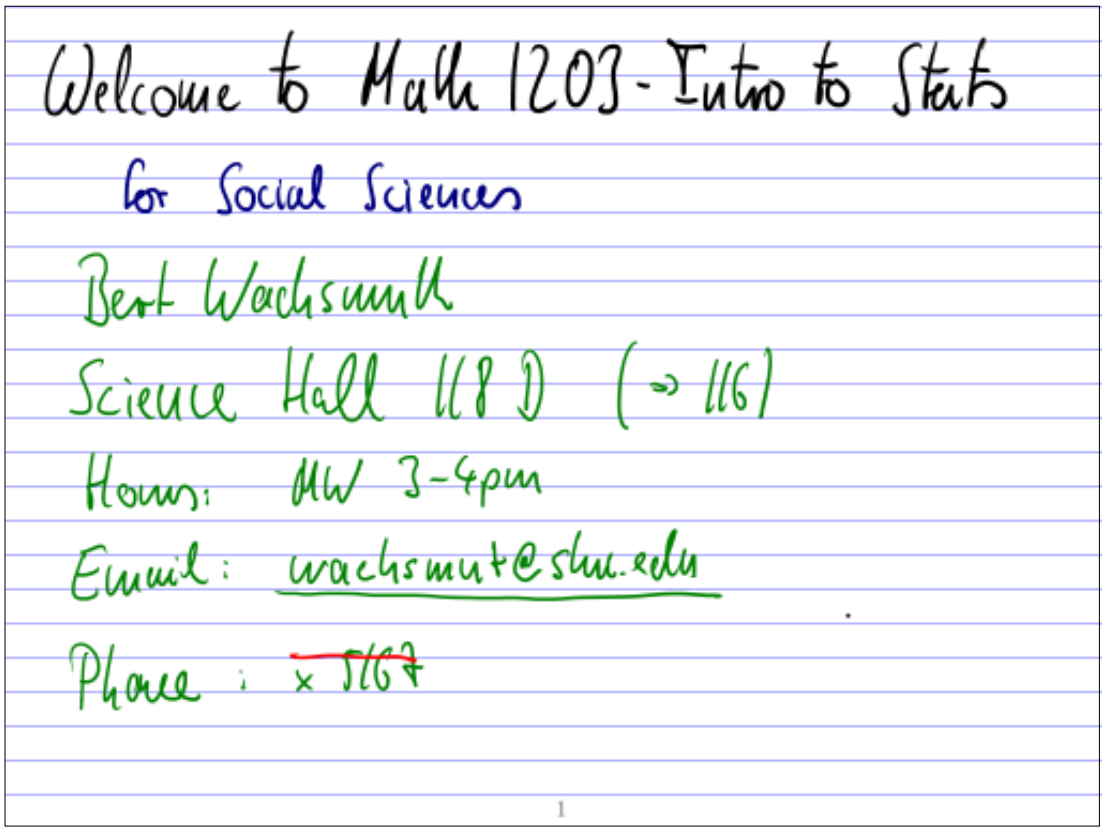
Panel 1



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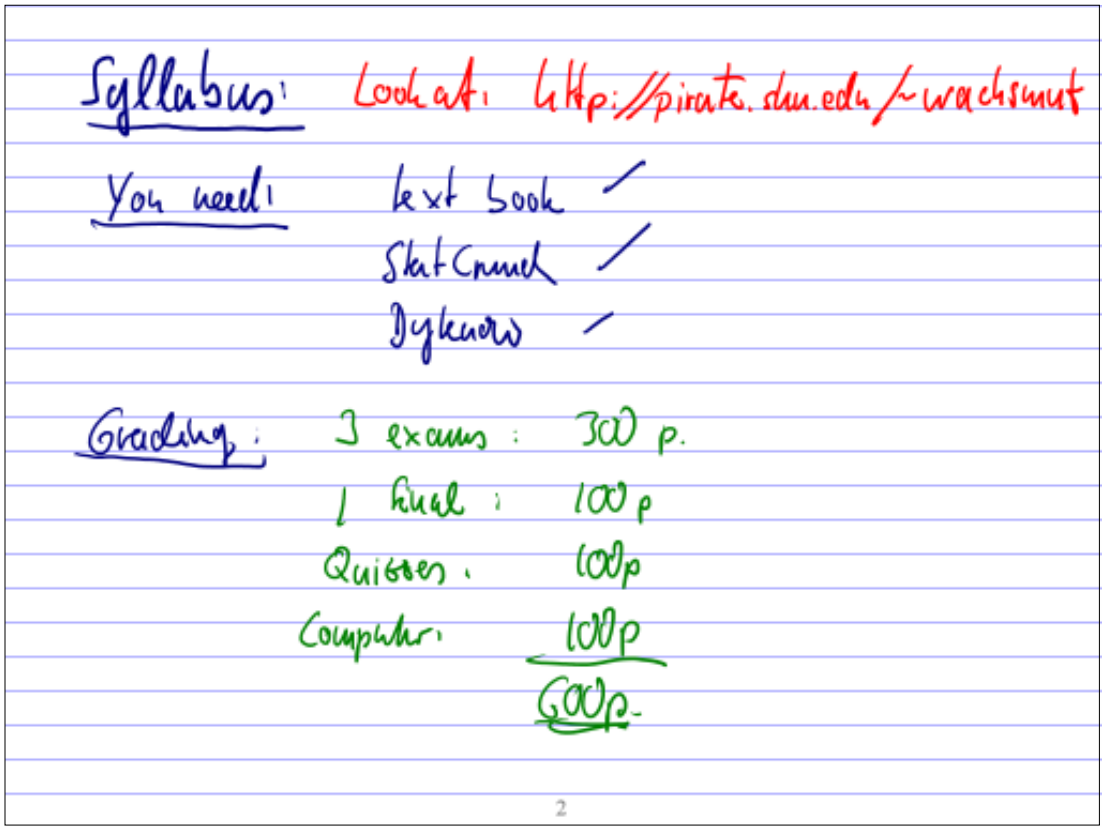

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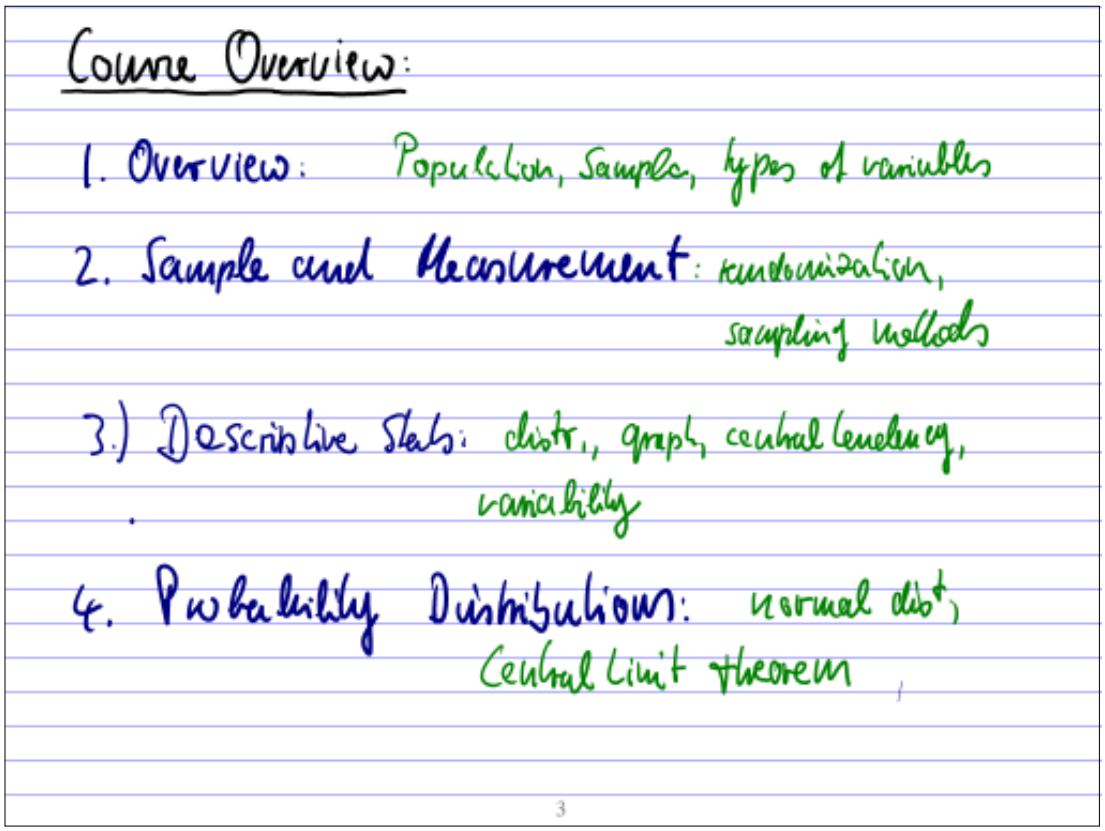

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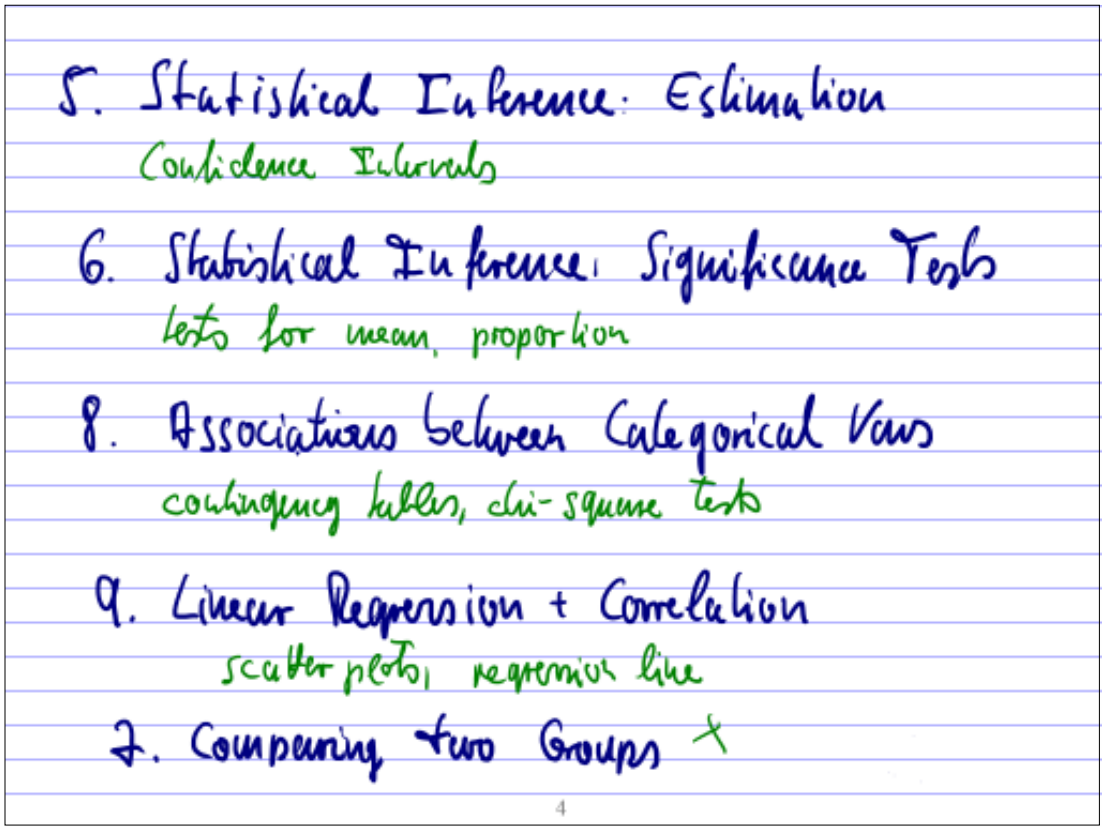
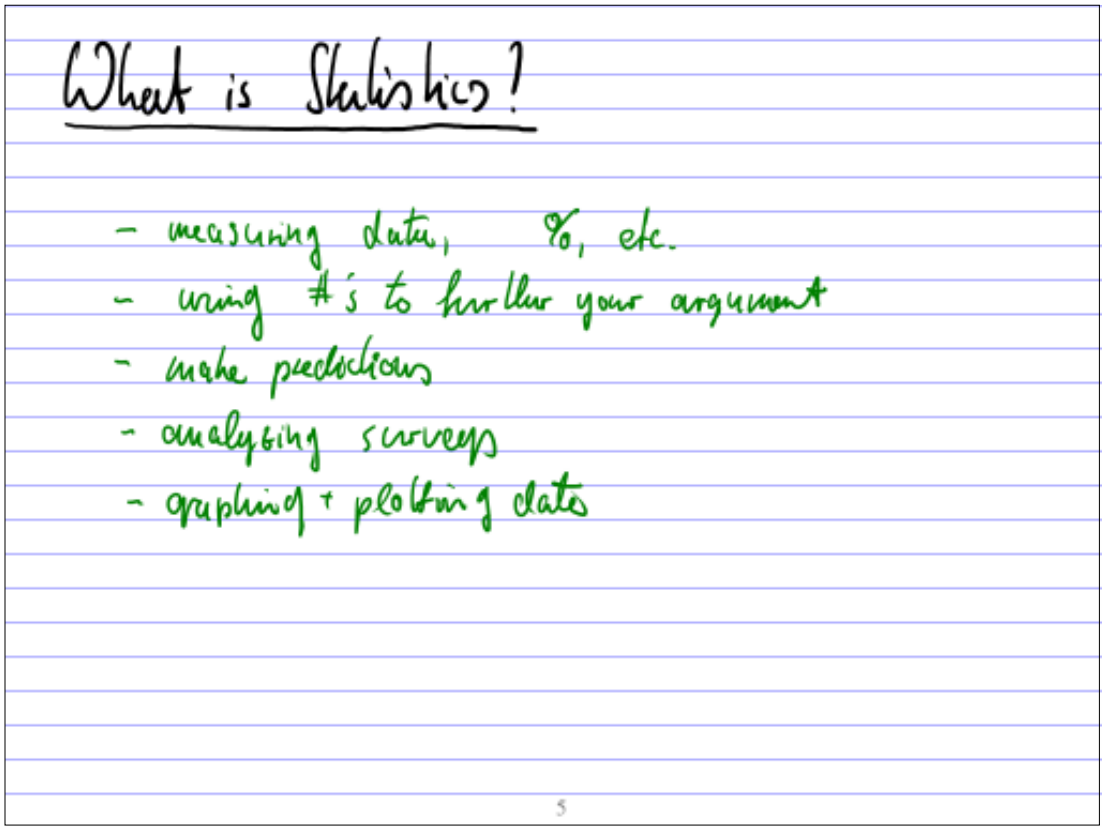
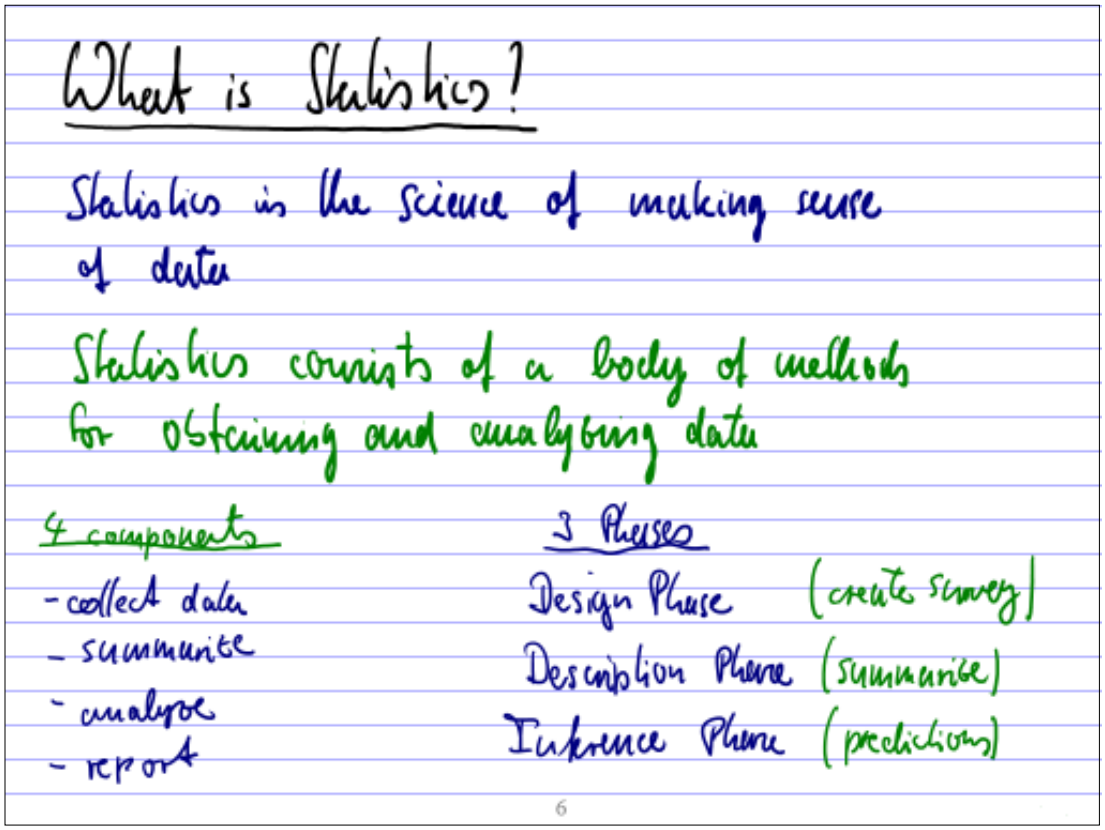


Panel 5



Panel 6



Panel 7

Example: Use a small group of numbers to make inferences about large group.

General Social Survey GSS 2008, asked 2000 adults in the US questions like 'do you believe in life after death'
Suppose 1250 say 'yes'

Design: GSS survey

Description: 1250 out of 2000 do believe, 62.5%

Inference: 62.5% ± error in the US believe.

e.g. 62.5 ± 3 %

Panel 8

Population: set of all measurements

Sample: a subset of population

Descriptive Statistics: summarizes info in a collection of data

Inferential Statistics: provides predictions about population based on sample data

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Panel 9

Parameter: numbers that apply to population

Statistics: numbers -"- sample

Ex: 1850 randomly selected US adults were asked "do you believe in heaven"? 1000 answered "yes", 800 "no", and 50 did not answer. We compute, somehow, that 55.5% ± 3% of US adults believe in heaven.

$\frac{1000}{1800} \cdot 100$

9

Panel 10

Ex: 1850 randomly selected US adults were asked "do you believe in heaven"? 1000 answered "yes", 800 "no", and 50 did not answer. We compute, somehow, that 55.5% ± 3% of US adults believe in heaven. Identify:

population: all US adults	sample: 1850 people
descr. stats: 55.5%	inf stats: 55.5 ± 3%
statistics: 55.5%	parameter: % of people in US who believe in heaven (unknown)

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Panel 11

Ex: Find avg. exam score in this class

stats and params are the same, no querying (inference) necessary.

Ex: Tax auditor has 25 000 accounts. How many are in error?

take, like, 200 accounts "at random", find that avg.

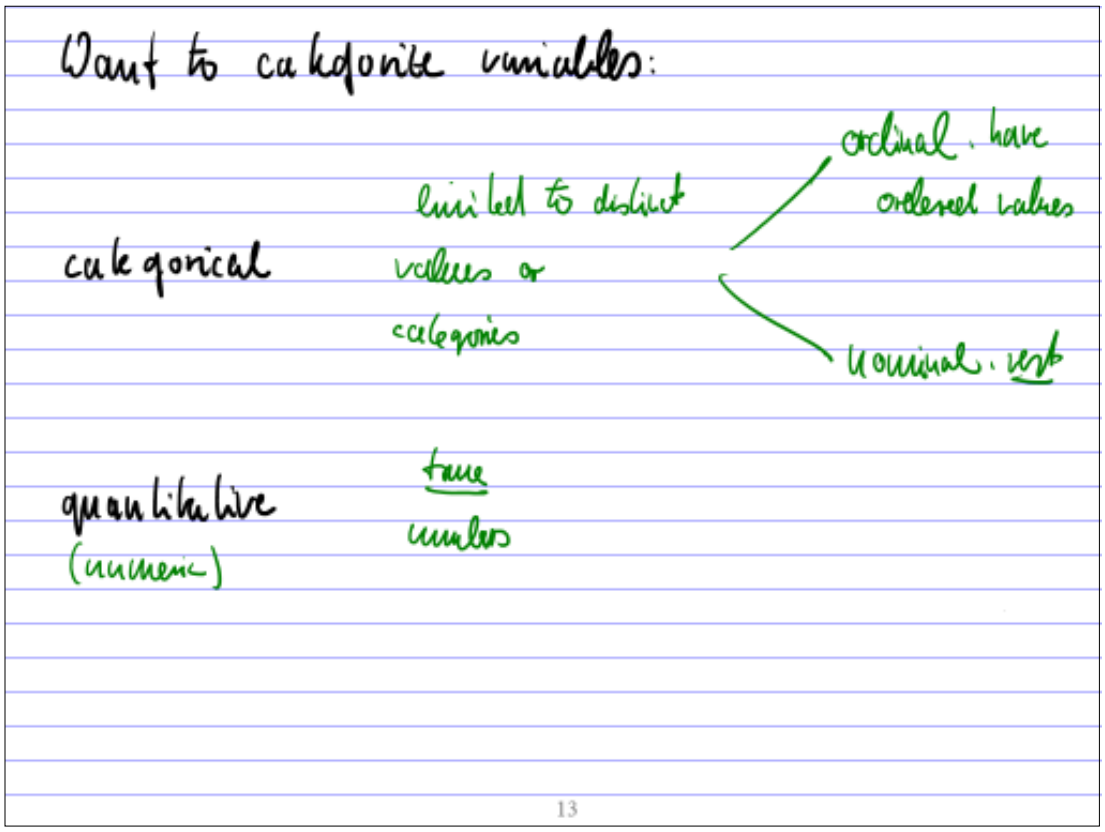
11

Panel 12

Stat Crunch + GSS Data

12

Panel 13



Panel 14