PY4210 Research and Statistics for Psychology
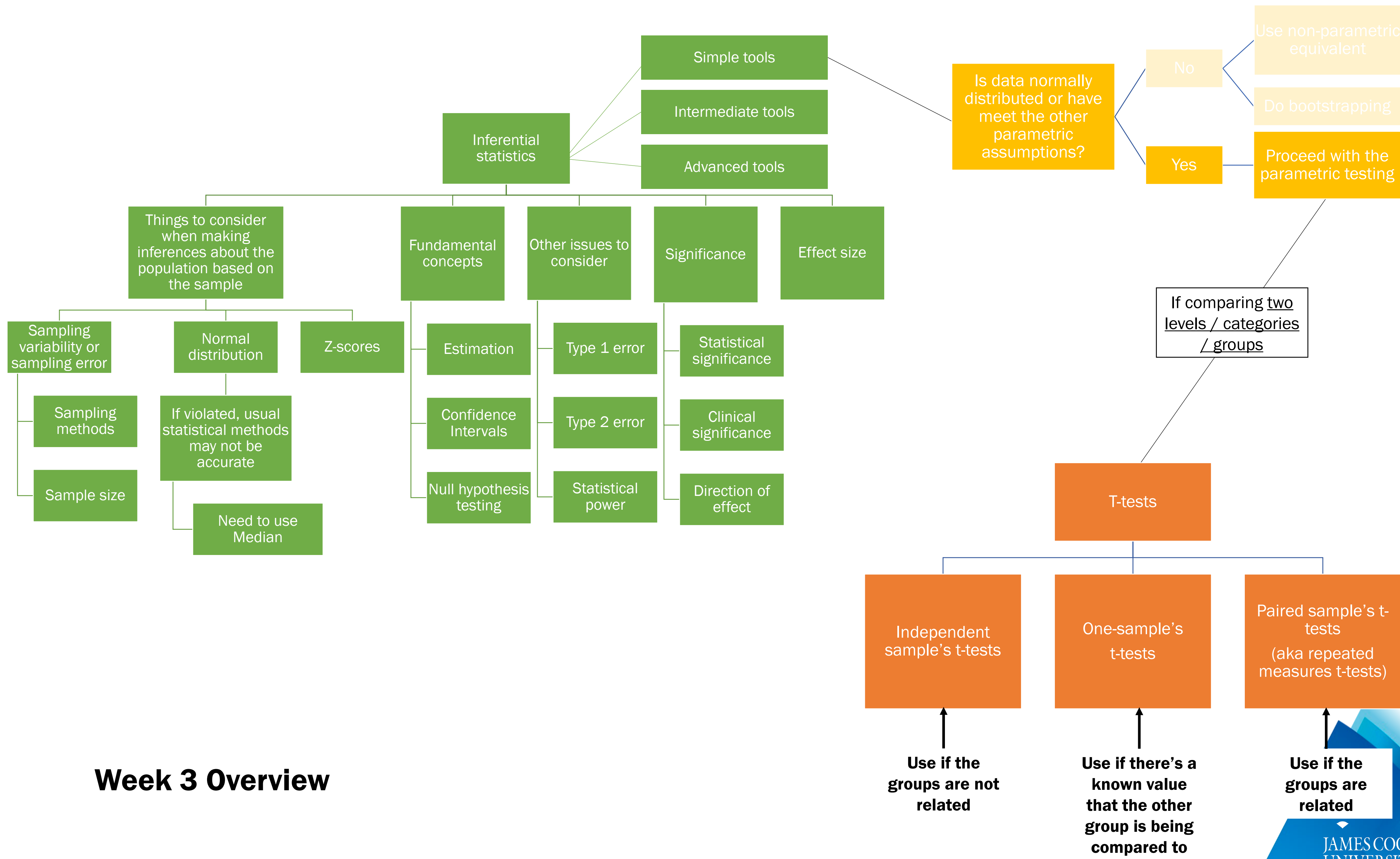
Simple tools

Intermediate tools

Advanced tools

Inferential statistics

Is data normally distributed or have meet the other parametric assumptions?

No

Use non-parametric equivalent

Do bootstrapping

Yes

Proceed with the parametric testing

Things to consider when making inferences about the population based on the sample

Fundamental concepts

Other issues to consider

Significance

Effect size

Sampling variability or sampling error

Normal distribution

Z-scores

Estimation

Type 1 error

Statistical significance

Sampling methods

If violated, usual statistical methods may not be accurate

Confidence Intervals

Type 2 error

Clinical significance

Sample size

Null hypothesis testing

Statistical power

Direction of effect

Need to use Median

If comparing two levels / categories / groups

T-tests

Independent sample's t-tests

One-sample's t-tests

Paired sample's t-tests
(aka repeated measures t-tests)

Use if the groups are not related

Use if there's a known value that the other group is being compared to

Use if the groups are related

Week 3 Overview

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