Summary of ST2304

Summary outline

Reminder of the modelling process

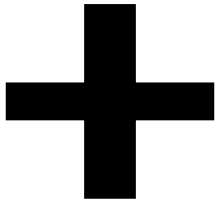
Types of models

Details of exam materials

Information on where to find resources

The modelling process

DATA



BIOLOGICAL QUESTION

The modelling process

Throughout course

Mathematical description of how the data were generated.

E.g.

- Distribution
- Linear equation (lines or groups)
- Defined by parameters

The modelling process

Inference

Choose a model

Get estimates of parameters

E.g. Maximum likelihood estimation

Find the parameters that give the highest likelihood given the data.

Weeks 1-4

The modelling process

Inference

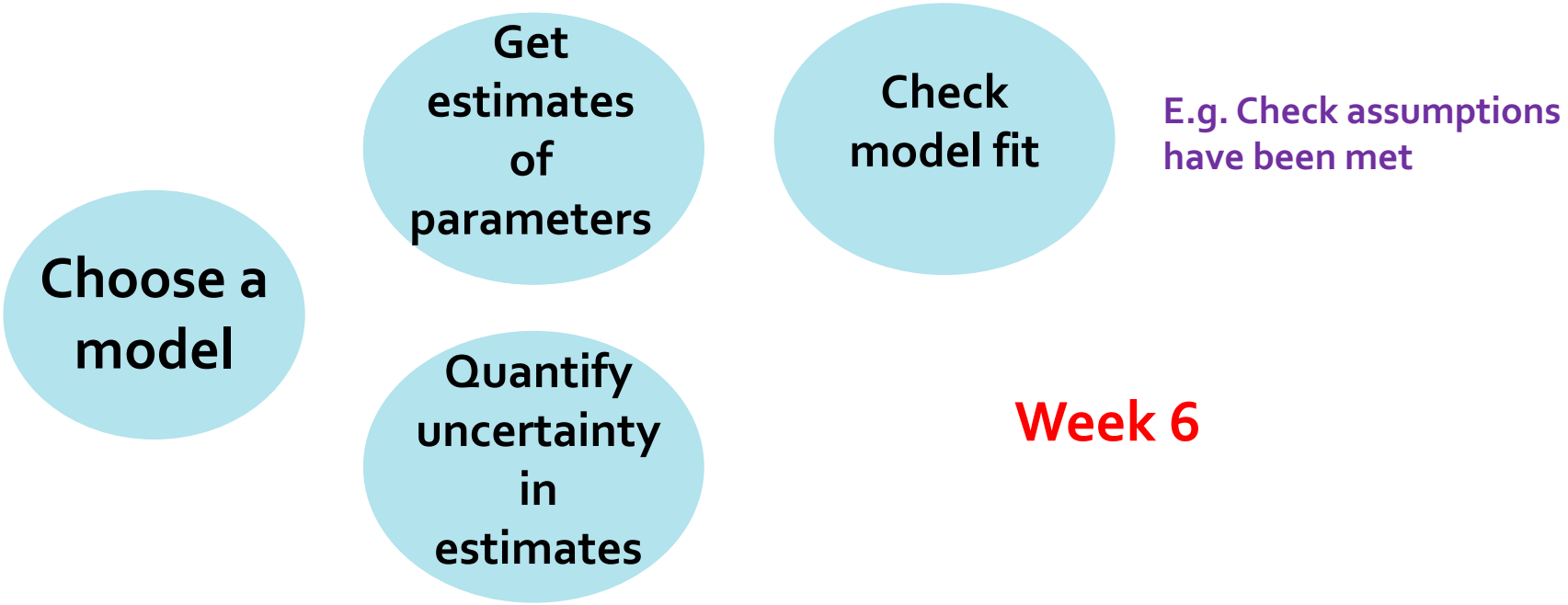
Get estimates of parameters

Choose a model

Quantify uncertainty in estimates

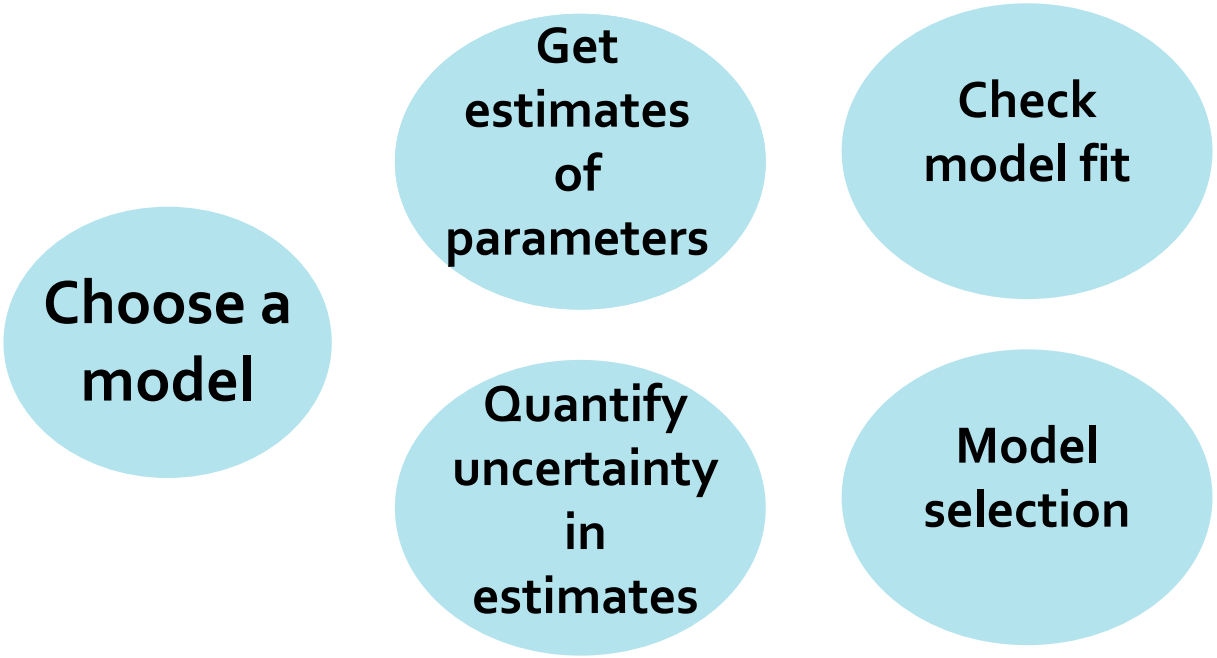
Week 3

The modelling process



The modelling process

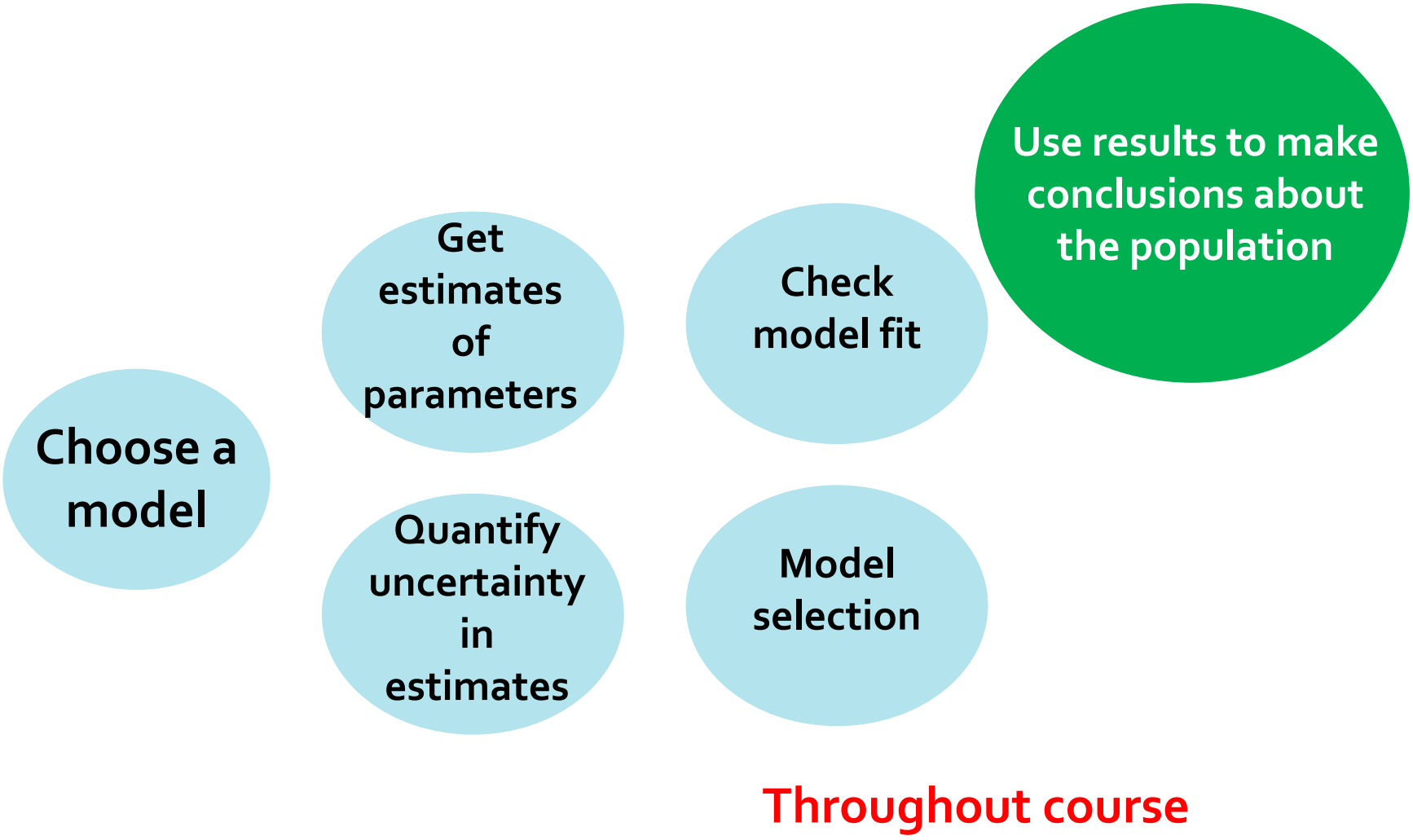
Week 10



E.g. Exploratory or confirmatory

Using AIC, BIC, or anova and F-Tests

The modelling process



Types of models

- Distributions (Binomial, Poisson and Normal) Weeks 1-4

Types of models

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- Linear models Weeks 5-10

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- Generalised linear models Weeks 11-13

Types of models

- Distributions (Binomial, Poisson and Normal) Weeks 1-4
- Linear models Weeks 5-10
- Generalised linear models Weeks 11-13
  - Binomial Week 12
  - Poisson Week 13

Details of exam materials

What you can take:

1 yellow A4 sheet with own handwritten notes (stamped by Department of Mathematical Sciences)

calculator:

- Casio fx-82ES PLUS and Casio fx-82EX
- Citizen SR-270X and Citizen SR-270X College
- Hewlett Packard HP30S

Details of exam materials

What we will give you: any complex formulas including inverse of logit link if needed, R help pages for any functions we use

Details of exam materials

What we expect you to know: the linear equation (Y=a+b*X), simple formulas e.g. that exp() or $e^{()}$ is the inverse of log()

Should know how to do these on your own calculator

Information on resources

Practice exams: try them and grade yourself!
https://www.math.ntnu.no/emner/ST2304/2019v/Practice%20exams/

Glossary and resources on Blackboard

Your own notes

Text books

Q&A here

GOOD LUCK!!!