

# Procedure The student show up outside the room at the time indicated under "Hand out of assignment". An assignment is drawn at random. One of the approved mandatory reports is drawn at random. If 4 reports have been approved, the student is allowed to remove one of them. The student is given half an hour to prepare. At the exam, the first 12 minutes are used for the assignment. Afterwards, 10 minutes are used for the report and 8 minutes for deciding on a mark.

Kristensen, A.R., E. Jørgensen & N. Toft. 2010. <u>Herd Management Science</u> <u>I. Basic concepts</u> 2010 Edition, Academic Books, Copenhagen. **Chapters** 1-2.

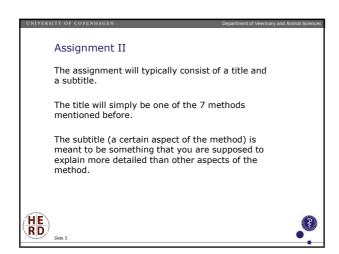
Kristensen, A.R., E. Jørgensen & N. Toft. 2010. Herd Management Science II. Advanced topics. 2010 Edition, Academic Books, Copenhagen. Chapters 6-14 (skip Section 8.5; skip Algorithms 8.3 - 8.10; skip sections 14.7.4, 14.7.5 and 14.11).

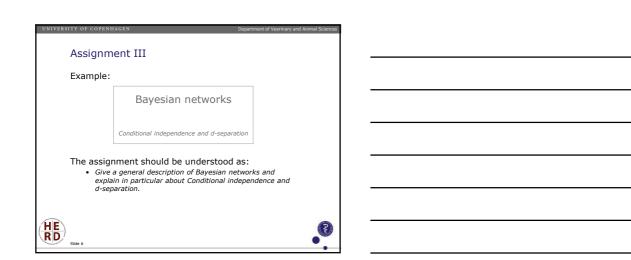
McAinsh, C.V. & A.R. Kristensen. 2004. <u>Dynamic modelling of a traditional African chicken production system</u>. *Tropical Animal Health and Production* 36, 609-626.

Kristensen, A.R. & T.A. Søllested. 2004b. <u>A sow replacement model using Bayesian updating in a three-level hierarchic Markov process II.</u> Optimization model. <u>Unestock Production Science</u> 87, 25-36.

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# Assignment I Half an hour before examination, an assignment is drawn at random. Basically, the assignment will relate to one of the methods studied during the course, i.e. Linear programming Bayesian networks Monitoring: Control charts for dependent and independent observations (classical methods) Monitoring: Dynamic Linear Models Markov decision processes Decision graphs Monte Carlo simulation





# UNIVERSITY OF COPENHAGEN

## What to do ...

Having drawn an assignment you are supposed to (some items below may not be relevant to all methods):

- y not be relevant to all methods):

  Describe what the method basically is used for (for instance by classifying it in the "Data -> Processing -> Information -> Processing -> Decision" diagram).

  Classify the method according to general model concepts like static/dynamic, stochastic/deterministic

  Describe how different kinds of knowledge is handled by the method (here Chapters 6 & 9 of the textbook Herd Management Science may be of help to you).

  Describe what kind of data/decisions the method is particularly well suited for.

  Explain strengths and weaknesses of the method.

  Give examples of applications (if any).

Explain strengths and weaknesses of the method.
 Give examples of applications (if any).
 Describe the aspect mentioned as subtitle.
You have 12 minutes for this. If you don't use all 12 minutes (or if we want you to elaborate further on certain aspects) we will ask questions (relating to the assignment).





## Mandatory report ...

Half an hour before examination, one of your mandatory reports is drawn at random. At the exam, the last 10 minutes will be used for a discussion of the report. Initially, you are asked to describe the strengths and weaknesses of the method in relation to the problem it is intended to solve. Afterwards, we will ask questions of the following kind:

- questions of the following kind:
   Further questions regarding strengths and weaknesses.
  - Could the model/method be improved in order to give a better solution?
  - Could we use other methods for this problem? Would that be better? Why (not)?

    Explain why the results showed ...

We have 10 minutes for this discussion.





Exam schedule (randomly assigned time slots)

| First names | Last name | Hand out of assignment | Examination start |
|-------------|-----------|------------------------|-------------------|
| Ashley      | Norval    | 10:00                  | 10:30             |
| Betina      | Hammer    | 10:30                  | 11:00             |
| Emilie      | Handberg  | 11:00                  | 11:30             |
| Anja        | Madsen    | 13:00                  | 13:30             |
| Anita       | Nielsen   | 13:30                  | 14:00             |
| Thomas      | Nielsen   | 14:00                  | 14:30             |



