## What is and what is not in the exam

Nearly all the material we have covered in lectures is examinable. The following sections of the notes are not examinable:

- Section 5 Review of linear algebra (assumed you know this but not tested directly)
- Section 7.3 Eigenvalues and eigenvectors of a real symmetric matrix
- Section 8.2 How does SVD work
- Section 8.5 SVD applications
- Section 9.1 Understanding the least squares solution
- Section 12-12.4 Review of probability (assumed you know this but not tested directly)
- Don't need to memorise functional form for common distributions
- Section 14.1 RNGs
- Section 16.10 Linear space alignment
- Formulae for distance used in Feng-Doolittle
- Formulae for calculating  $A_{kl}$  and  $E_k(b)$  without imputing sequences in Baum-Welch
- Section 19 Applications of HMMs
- Mathematical definition of ultrametric and additive distances
- Formulae in Neighbour-Joining algorithm
- Section 20.5.1 Weighted parsimony
- Detail of any of the mutation models
- Section 21.3 and anything after that
- Lecture on applications of phylogenetics