



Position

After describing the fundamentals of Bayesian inference, this course will examine the specification of prior and posterior distributions, Bayesian decision theoretic concepts, the ideas behind Bayesian hypothesis tests, model choice and model averaging, and evaluate the capabilities of several common model types, such as hierarchical and mixture models. An important part of Bayesian inference is the requirement to numerically evaluate complex integrals on a routine basis. Accordingly, this course will also introduce the ideas behind Monte Carlo integration, importance sampling, rejection sampling, Markov chain Monte Carlo samplers such as the Gibbs sampler and the Metropolis-Hastings algorithm and use of the WinBUGS posterior simulation software.



The course will include material taken from some of the

- x Show an appreciation of the importance of computational techniques in Bayesian inference.
- x Perform real-world Bayesian data analyses

using the words or ideas of others and passing them off as your own. Nor is it permissible to sell copies of lecture or tutorial notes as students do not own the rights to this intellectual property.

If a student breaches the Student Code with respect to academic integrity, the University may take disciplinary action under the .

The UNSW Student Code and the Student Misconduct Procedure can be found at:

<https://student.unsw.edu.au/plagiarism>

An online Module “[Working with Academic Integrity](https://student.unsw.edu.au/aim)” (<https://student.unsw.edu.au/aim>) is a six-lesson interactive self-paced Moodle module exploring and explaining all of these terms and placing them into your learning context. It will be the best one-hour investment you’ve ever made.

Plagiarism is presenting another person's work or ideas as your own. Plagiarism is a serious breach of ethics at UNSW and is not taken lightly. So how do you avoid it? A one-minute video for an overview of how you can avoid plagiarism can be found <https://student.unsw.edu.au/plagiarism>.

ELISE is designed to introduce

If you suffer from a chronic or ongoing illness that has, or is likely to, put you at a serious disadvantage, then you should contact the Equitable Learning Services (previously known as SEADU) who provide confidential support and advice.

They assist students:

- x living with disabilities
- x with long- or short-term health concerns and/or mental health issues
- x who are primary carers
- x from low SES backgrounds
- x of diverse genders, sexes and sexualities
- x from refugee and refugee-like backgrounds
- x from rural and remote backgrounds
- x who are the first in their family to undertake a bachelor-level degree.

Their web site is: <https://student.unsw.edu.au/els/services>

Equitable Learning Services (ELS) may determine that your condition requires special arrangements for assessment tasks. Once the School has been notified of these, we will make every effort to meet the arrangements specified by ELS.

Additionally, if you have suffered significant misadventure that affects your ability to complete the course, please contact your Lecturer-in-charge in the first instance.

The Learning Centre offers academic support programs to all students at UNSW Australia. We assist students to develop approaches to learning that will enable them to succeed in their academic study. For further information on these programs please go to:

<http://www.lc.unsw.edu.au/services-programs>

The School will contact you (via student email account) after special consideration has been granted to reschedule your missed assessment, for a lab test or paper-based test only.

For applications for special consideration for assignment extensions, please note that the new submission date and/or outcome will be communicated through the special consideration web site

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