COURSE DETAIL

BAYESIAN INFERENCE AND COMPUTATION
Country Australia
Host Institution University of New South Wales
Program(s) University of New South Wales
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Statistics Mathematics
UCEAP Course Number 171
UCEAP Course Suffix
UCEAP Official Title BAYESIAN INFERENCE AND COMPUTATION
UCEAP Transcript Title BAYESIAN INF & COMP
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course examines the fundamentals of Bayesian inference, including the specification of prior and posterior distributions, Bayesian decision theoretic concepts, the ideas behind Bayesian hypothesis tests, model choice and model averaging, the capabilities of several common model types, such as hierarchical and mixture models. It also looks at 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.

Language(s) of Instruction
English

Host Institution Course Number
MATH3871

Host Institution Course Title
BAYESIAN INFERENCE AND COMPUTATION

Host Institution Campus
New South Wales

Host Institution Faculty

Host Institution Degree

Host Institution Department

Print