316-672 Bayesian Econometrics

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: Three hours of classes per week plus three hours of seminars during the (Semester 2). Total Time Commitment: Not available
Prerequisites:	316-678 Econometric Techniques.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Coordinator:	Dr Liana Jacobi
Subject Overview:	Basic tools and characteristics of Bayesian inference and the application of Bayesian inference to a number of econometric models are considered. The tools and characteristics will include joint, conditional and marginal probability distributions, prior, posterior and predictive distributions, Bayes theorem, representing uncertain information, and the estimation of moments and other integrals via Markov chain Monte Carlo techniques. The econometric models will include the traditional regression model, the seemingly unrelated regressions model, probit and tobit models and some time-series models.
Objectives:	On successful completion of this subject students should be able to: # Explain the concepts of joint, conditional and marginal probability density functions and their relevance for Bayesian inference; # Derive posterior density functions for common econometric models including the traditional regression model, the seemingly unrelated regression model, probit and tobit models and some time series models; # Explain the relevance of Markov chain Monte Carlo techniques for Bayesian inference; # Program Gibbs samplers and Metropolis-Hastings algorithms for a number of models including the seemingly unrelated regressions models and the ordered probit model; # Interpret results from Bayesian inference; # Explain the concept of model averaging; # Estimate marginal likelihoods and use these estimates to model average a simple problem.
Assessment:	A 2-hour end-of-semester examination (60%), and class assignments of up to 5000 words in total (40%).
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees

Generic Skills:	On successful completion of this subject, students should have improved the following generic skills: # Evaluation of ideas, views and evidence # Synthesis of ideas, views and evidence # Strategic thinking # Critical thinking # Application of theory to economic policy and business decision making # Summary and interpretation of information # Application of Windows software # Using and designing computer programs # Statistical reasoning # Problem solving skills # Collaborative learning and teamwork # Written communication # Oral communication
Notes:	Students may not gain credit for both 316-672 Bayesian Econometrics and 316-407 Bayesian Econometrics.