ECOM90010 Bayesian Econometrics

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2011, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: Three hours of classes per week plus three hours of seminars during the semester Total Time Commitment: Estimated total time commitment of 120 hours per semester
Prerequisites:	ECOM40006 Econometric Techniques / ECOM90013 Econometric Techniques

Subject	Study Period Commencement:	Credit Points:
ECOM40006 Econometric Techniques	Semester 1	12.50
ECOM90013 Econometric Techniques	Semester 1	12.50

Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	ECOM40002 Bayesian Econometrics

Subject	Study Period Commencement:	Credit Points:
ECOM40002 Bayesian Econometrics	Semester 2	12.50

Core Participation Requirements:	For the purposes of considering requests for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements for this entry.The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Contact:	Graduate School of Business and Economics Level 4, 198 Berkeley Street Telephone: +61 3 8344 1670 **Online Enquiries (https://nexus.unimelb.edu.au/OnlineEnquiryForm.aspx?campaigncode=CMP-01311-VZ8293&cssurl=https://nexus.unimelb.edu.au/cssfiles/gsbe.css&redirecturl=http://www.gsbe.unimelb.edu.au/contactus/nexus/gsbe.html)** Web: **www.gsbe.unimelb.edu.au (http://www.gsbe.unimelb.edu.au/)**
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:	2-hour end-of-semester examination (60%)Class assignments of up to 5000 words in total (40%)
Prescribed Texts:	You will be advised of prescribed texts by your lecturer.
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 ECOM90010 Bayesian Econometrics and ECOM40002 Bayesian Econometrics.