國立清華大學課程大綱

科號		組別		學分	3	人數限制	20
上課時間	RnR5R6			教室	TBA		
科目中文名稱	數據分析與機器學習						
科目英文名稱	Data Analysis and Machine Learning						
任課教師	余朝恩						

※以上各欄資料由程式提供※

※下列各欄由任課教師提供※

一、課程說明	This course surveys basic concepts and technical tools required for proceeding the Bayesian data analysis. The goal of this course targets to equip students with the understandings of how to interpret and what are the limits of common data analytical results. In addition to introducing theoretically analytical models, proper programming skills are covered in this course. **Note:** This course requires learning Python programming skills for verifying theoretical methods and practicing analytical applications.
二、指定用書	Doing Bayesian Data Analysis, 2nd Ed. (ISBN: 0124058884) Introduction to Computation and Programming Using Python (ISBN: 0262045788)
三、教學方式	Lecture: 30% Discussion: 30% Report: 40%
五、教學進度	Week 1-2: The history of Bayesian statistics Week 3: Review of foundations in probability

	Week 4-5: Bayes theorem and applications Week 6: Review of Python programming Week 7: Bayesian vs frequentist inference Week 8-9: Bayesian inference with Python Week 10-12: MCMC simulations Week 13-15: MCMC simulations with Python Week 16: A comparison between Bayesian and econometric analyses Week 17-18: Final Presentations
六、成績考核	Exams 40%; Reports 60%
七、講義位址 http://	http://mx.nthu.edu.tw/~chaoenyu/

根據本校公布之佈的「大學教育場域 AI 協作、共學與素養培養指引」，本門課程採取禁止使用，以下為相關的監管機制

- 修讀本門課程之學生應注意本門課不得繳交使用生成式人工智慧所產出的作業、報告或個人心得。若經查核發現，教師、學校或相關單位有權重新針對作業或報告重新評分或不予計分。
- 修讀本課程之學生於選課時視為同意以上倫理聲明。