



課 綱 Course Outline  
企業管理學系博士班國際企業組

中文課程名稱 Course Name in Chinese	隨機過程與決策研究				
英文課程名稱 Course Name in English	Stochastic process and decision making				
科目代碼 Course Code	BM_77700	班 別 Degree	博士班 Ph. D.		
修別 Type	選修 Elective	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
<p>This course considers optimal stochastic decision processes from the viewpoint of stochastic programming. It focuses on theoretical properties and on approximate or numerical solution techniques for time-dependent optimization problems with random parameters (multistage stochastic programs, optimal stochastic decision processes). Methods for finding approximate solutions of probabilistic and expected cost based deterministic substitute problems are presented. Besides theoretical and numerical considerations, the proceedings volume contains selected refereed papers on many practical applications to economics and engineering: risk, risk management, portfolio management, finance, insurance-matters and control of robots.</p>					
系教育目標 Dept.'s Education Objectives					
1	培養具國際企業知識之高階管理人才。 Build a foundation of international business knowledge to prepare students for being higher-level managers.				
2	培養具創新思維與創業能力之高階管理人才。 Build a foundation of innovation and entrepreneurship to prepare students for being higher-level managers.				
3	培養具服務業經營能力之高階管理人才。 Create a managerial ability in Service industry for advanced managers.				
4	培養在地經營理念之高階管理人才。 Offer a program with an emphasis on higher-level management philosophy responsive to the Taiwanese business context.				

系專業能力 Basic Learning Outcomes		課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives
A	具備國際企業管理之知識與能力。 Students will have basic knowledge of international business.	○
B	具備邏輯思考、問題分析與解決之能力 Students will be able to identify, analyze and solve business problems with logical thinking.	●
C	具備溝通協調與團隊合作之能力。 Students will be able to demonstrate effective communication, coordination and teamwork skills.	○
D	具備國際觀及外語溝通之能力。 Students will be able to communicate in foreign languages and have an awareness on global and cultural diversity issues.	○
E	具備創新、創業之思維與能力。 To build a the concept and ability for innovation and entrepreneurship.	○
F	具備服務設計與產業分析之能力。 Students will be able to demonstrate the abilities for service design and industry analysis	●
G	具備國際企業倫理之素養。 Students will be able to identify and understand the importance of ethical decision making for international business.	○

圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

#### 課程大綱

#### Course Outline

Part I. Dynamic Decision Problems under Uncertainty: Modeling Aspects  
 "Reflections on Output Analysis for Multistage Stochastic Linear Programs  
 Jitka Dupacov?  
 "Modeling Support for Multistage Recourse Problems  
 Peter Kali, J?nos Mayer  
 "Optimal Solutions for Undiscounted Variance Penalized Markov Decision Chains  
 Karel Slak?, Milan Sitar  
 "Approximation and Optimization for Stochastic Networks  
 Julien Granger, Ananth Krishnamurthy, Stephen M. Robinson  
 Part II. Dynamic Stochastic Optimization in Finance  
 "Optimal Stopping Problem and Investment Models  
 Vadim I. Arkin, Alexander D. Slastnikov

資源需求評估 (師資專長之聘任、儀器設備的配合 . . . 等)

Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

1. 本系專任教師授課
2. 單槍、筆記型電腦
3. 教學助教
4. 影印機

#### 課程要求和教學方式之建議

#### Course Requirements and Suggested Teaching Methods

1. 上課講授、個案研討、Q&A
2. 期中報告、期末報告
3. 期中成績(30%)、期末成績(30%)、平時成績(20%)、Q&A(20%)
其他 Miscellaneous
參考書目： 1. Dynamic Stochastic Optimization, Edited by Kurt Marti, Yuri Ermoliev, and Georg Pflug Springer -Verlag and IIASA, 2004. 2. Stochastic Modeling and Optimization: With Applications in Queues, Finance, and Supply Chains, by David D. Yao, Hanqin Zhang, Xun Yu Zhou, Springer, 2003.