



Bachelor of Science (Honours) in

DATA SCIENCE AND BUSINESS INTELLIGENCE (BSC-DSBI)

數據科學及商業智能學（榮譽）理學士



恒生管理學院
HANG SENG
MANAGEMENT COLLEGE



Prof TANG Man Lai
Programme Director, BSC-DSBI Programme
Head, Department of Mathematics and Statistics
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數據科學及商業智能學（榮譽）理學士
課程總監
數學及統計學系系主任
決策科學學院副院長
鄧文禮教授

MESSAGE FROM PROGRAMME DIRECTOR

In this data-driven world, every organisation needs to deal with data. The ability to generate predictive insights and new product innovations with advanced analytical tools and algorithms is of increasing importance. In addition, there is a need for business intelligence professionals who are able to manage and report existing business data in order to monitor or address various concerns within the enterprise.

As an international business and financial centre, Hong Kong serves as a bridge between China and the rest of the world. With the balanced combination and integration of studies in Data Science and Business Intelligence (DSBI) offered by our programme, well-trained DSBI professionals would contribute to the industry to sustain its leadership and enhance Hong Kong's future competitiveness.

On behalf of the staff of our BSC-DSBI programme, I warmly invite you to explore this enriching and rewarding journey with us.

課程總監的話

現代社會瞬息萬變，各行各業都需要處理大量市場數據。運用數學及統計學知識上的分析技能，協助機構作出準確的商業預測及生產創新的產品，亦變得愈來愈重要。此外，為提高企業內部監察和管理能力，機構對能夠處理商業數據的專業人才需求，亦愈趨殷切。

作為國際金融中心，香港是連接中國大陸及世界各地的橋樑。面對周邊地區的激烈競爭，香港必須加強此方面的人才培訓，以鞏固行業的領導地位，同時提升香港整體競爭力。作為全港首創、融合數據科學及商業智能學兩個領域的學士學位課程，我們有信心此課程有助培訓優秀的數據科學家和商業智能學專業人員，回應市場的需求，並為本港的經濟發展作出貢獻。

謹代表數據科學及商業智能學（榮譽）理學士課程全人，誠意邀請選修本課程！

MESSAGE FROM PROGRAMME ADVISORY COMMITTEE MEMBER

Data Science and Business Intelligence are often seen as two very different approaches to extract meaningful information from big data sets using statistical techniques. This innovative Programme offers students solid training in the theory and methodologies that underpin both approaches and provide a timely and useful bridge between the two perspectives, thus facilitating multiple career pathways for graduates in the Programme.

課程顧問委員的話

商業活動衍生大量市場數據與商業資訊。數據科學及商業智能學可提供不同的分析技巧及方法，幫助企業將龐大的數據轉化成有用的資訊，從而作出明智的商業決策。本課程獨特之處在於融合這兩個範疇的知識，為學生提供全面而優質的學術訓練，從而開拓多元化的就業途徑。



Dr TONG Chong Sze
MA, PhD (Cantab), CMath, CSci, FIMA
Member of Advisory Committee,
BSC-DSBI Programme

英國劍橋大學博士、英國特許數學家、
英國特許科學家及英國數學與數學應用學
院院士
數據科學及商業智能學（榮譽）理學士
顧問委員
唐創時博士

What is DSBI? 甚麼是數據科學及商業智能學？

Data Science 數據科學

A collection of analytical skills and techniques derived from mathematics, statistics and computer science for extracting information from data.

集合數學、統計學及計算機科學的分析技能和技術，從數據中提取有用訊息。

Business Intelligence 商業智能學

The analysis, integration and presentation of information for making business decision.

分析、整合和展示商業訊息，從而作出商業決策。

Programme Overview 課程概要

- The world is data-driven and organisations of all sizes need to deal with data.
今日的世界由數據主導，企業無論規模大小都需要處理數據。
- There is an increasing demand for data scientists and business intelligence professionals to analyse and manage the ever-growing volume of business data.
各行業對數據科學家和商業智能專業人員的需求日益增長，期望他們能夠分析和處理不斷上升的商業數據量。
- BSC-DSBI is the first degree programme in Hong Kong to integrate Data Science and Business Intelligence with a comprehensive business education to respond to market needs.
本課程為全港首創，融合「數據科學」及「商業智能學」兩個領域的知識，並提供全面的商學教育，以回應市場的需求。

Programme Information and Structure 課程資訊及架構

- Four-year degree programme 四年制學士學位課程
- Study at least 40 modules (120 credits) 需最少修讀40個單元（120個學分）
- Two major Study Areas: Common Core Curriculum and Major Studies
設有兩大學習範疇：共通核心課程及主修科目。
- The number and distribution of core and elective modules are as follows:
必修及選修單元數目分佈如下：

Study Area 學習範疇	No. of Modules (Credits) 單元數目 (學分)	Percentage 百分比
Common Core Curriculum 共通核心課程	16 (48)	40.0%
Major Studies 主修科目	19 (57)	47.5%
Free Electives 選修單元	5 (15)	12.5%
Total 合共	40 (120)	100%



PROGRAMME INFORMATION AND STRUCTURE

Year 1 第一年

MAJOR STUDIES 主修科目

- Foundations of Data Science
數據科學基礎
- Probability and Statistical Theory
概率及統計論
- Business Economics 1
商業經濟學（一）
- Business Economics 2
商業經濟學（二）
- Principles of Management
管理學原理

COMMON CORE CURRICULUM 共通核心課程

- Freshman Chinese
大一國文
- Chinese Literature Appreciation
中國文學欣賞
- English for Academic Purposes
學術寫作英語
- English for Effective Communication
商效傳訊英語
- Introduction to Linear Algebra and Calculus
線性代數及微積分概論
- Introduction to Computer Programming
計算機程序設計導論
- Perspectives on General Education
通識概論

Year 2 第二年

MAJOR STUDIES 主修科目

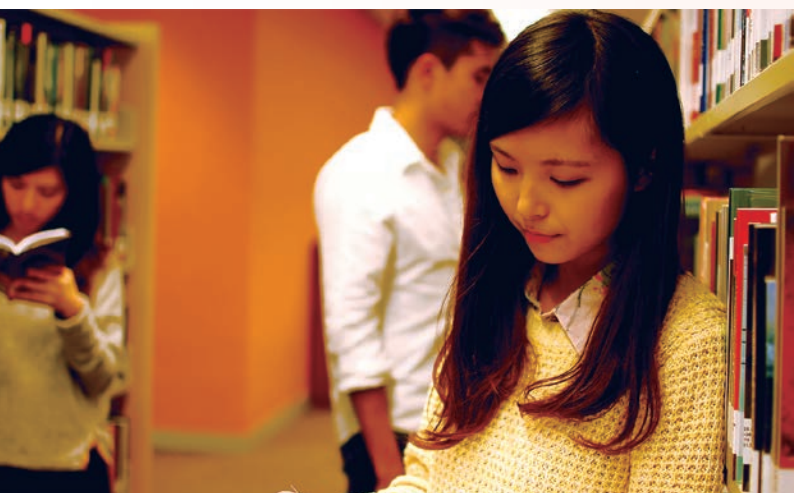
- Quantitative Methods for Business Management
企業管理定量方法
- Business Regression Analysis
商業回歸分析
- Statistical Computing in Practice
電腦統計應用
- Financial Accounting
財務會計學
- Principles of Marketing
市場學原理

COMMON CORE CURRICULUM 共通核心課程

- Putonghua for Business
商貿普通話
- English for Business Communication
商業傳訊英語
- Database Management Systems
數據庫管理系統

ELECTIVES 選修單元

- 2 General Education Electives
兩個通識選修單元



課程資訊及架構

Year 3 第三年

MAJOR STUDIES 主修科目

- Simulation Methods for Business
商業模擬方法
- Ethics and Official Statistics
官方統計及道德概論
- Survey Sampling
抽樣調查學
- Hong Kong Business Law
香港商業法
- Financial Management
財務管理

ELECTIVES 選修單元

- 2 General Education Electives
兩個通識選修單元
- 3 Free Electives
三個選修單元

Year 4 第四年

MAJOR STUDIES 主修科目

- Financial Time Series for Business Intelligence
時間序列及商業智能分析
- Multivariate Analysis and Data Mining
多元數據分析及挖掘
- Data Audit and Imputation
數據審計及修補
- Business Policy and Strategy
企業政策及策略

ELECTIVES 選修單元

- 2 General Education Electives
兩個通識選修單元
- 2 Free Electives
兩個選修單元

HIGHLIGHTS OF ELECTIVE MODULES 重點選修單元

- Statistical Inference 推斷統計學
- Marketing Engineering 市場營銷工程學
- Categorical Data Analysis 類別數據分析
- Credibility Theory 可信度理論
- Stochastic Analysis for Business 商業隨機分析
- Survival and Loss Modelling 存活及損失模型
- Design and Analysis of Experiments 實驗設計及分析
- Strategic Analysis and Modelling 策略分析及建模
- Construction and Evaluation of Actuarial Models I
精算模型構建及分析 (一)
- Construction and Evaluation of Actuarial Models II
精算模型構建及分析 (二)
- Selected Topics in Data Science and Business Intelligence
數據科學及商業智能學 (專題討論)
- DSBI Research Project
數據科學及商業智能學 (專題研究)





Professional Recognition 專業認可

Students are provided with sufficient knowledge for achieving professional recognition, such as:

本課程教授學生充足的知識，獲取以下專業認可：

- Graduate Statistician (GradStat), Hong Kong Statistical Society 香港統計學會
- SAS Joint Certificate in Data Mining (SAS Institute Inc)
- Associate of the Society of Actuaries (ASA), Society of Actuaries 北美精算學會

Career Prospects 就業前景

Graduates have a wide range of career options, such as:

畢業生的就業選擇眾多，例如：

- Data Scientist
數據科學家
- Statistician
統計師
- Financial Analyst
金融分析師
- Marketing Executive
營銷行政人員
- Business Intelligence Professional
商業智能專業人員
- Actuary
精算師
- Financial Consultant
理財顧問
- Market Researcher
市場研究員

Applied Statistics Laboratory 應用統計實驗室

The Applied Statistics Laboratory has 60 computer stations which are equipped with popular mathematical / statistical software such as MATLAB and SAS for the students to practise their computing skills.

應用統計實驗室設有60台電腦，內置流行的數學或統計軟件，如MATLAB及SAS，供學生學習之用，以及練習統計和電腦的應用技能。

Student Exchange Programme 學生交流計劃

Hang Seng Management College has engaged in exchange partnership with renowned overseas institutions around the world. Students can take this opportunity to broaden their horizons and gain valuable life experience.

恒生管理學院與世界著名海外學府簽訂學生交流合作協議，藉此讓學生擴闊視野，得到寶貴的生活經驗。

- Gordon College, USA
- Concordia University, Canada
- EDC Paris Business School, France
- University of Rouen, France
- HAAGA-HELIA University of Applied Science, Finland
- Laurea University of Applied Science, Finland
- HZ University of Applied Sciences, the Netherlands
- Pukyong National University, South Korea



Internship Programme 實習計劃

More than 100 organisations have participated in the internship programme. About 70% of BSC-DSBI students participated in the internship programme each year.

超過100間機構參與本校的實習計劃，每年約有七成BSC-DSBI學生到不同機構實習。

Some of the Participating Organisations (in no particular order) :
部分提供實習機會的機構 (排名不分先後) :

- Hang Seng Bank
恒生銀行
- Bank of China (Hong Kong)
中國銀行 (香港)
- Census and Statistics Department
政府統計處
- Pacific BMW (USA)
Pacific BMW (美國)
- DBS Bank (Hong Kong)
星展銀行 (香港)
- Regal Hotels International
富豪國際酒店集團
- HSBC
匯豐銀行
- Ernst & Young
安永會計師事務所
- HKTV
香港電視

Mentorship Programme 導師計劃

The mentorship programme is organised to help student to establish friendships with professional elites and provide a platform to increase students' exposure to the industry. A group of professional elites from different industry sectors are invited, including Hang Seng Bank, Standard Chartered Bank, Ernst & Young, KPMG, JP Morgan, Accenture and government sectors, and so on. They share their valuable work and life experience as well as useful skills with our mentees. Through sharing and interacting with mentors, mentees are able to obtain first-hand career information and career prospects.

導師計劃旨在幫助學生與業界精英建立友誼，為學生提供與業界接觸的平台。本課程的導師計劃邀請來自不同行業界別的業界精英參與，包括恒生銀行、渣打銀行、安永會計師事務所、畢馬威會計師事務所、摩根大通、埃森哲和政府部門等。他們為本系學生分享寶貴的人生及工作經驗。透過與導師的分享與互動，學生能夠獲得各行業就業前景的一手資訊。

Academic Staff Profile 學術團隊

Professor

Prof TANG Man Lai

鄧文禮教授

Programme Director and Head
Associate Dean of the School of
Decision Sciences
PhD (UCLA)

Assistant Professor

Dr LEUNG King Tai, Jacky

梁景泰博士

Associate Programme Director
and Associate Head
PhD (HKBU)

Associate Professor

Dr CHOY Siu Kai

蔡少佳博士

PhD (HKBU)

Assistant Professor

Dr CHU Man Ying, Amanda

朱文英博士

PhD (HKU)

Assistant Professor

Dr HO Man Wai

何文偉博士

PhD (HKUST)

Assistant Professor

Dr LAM Shu Yan, Benson

林樹仁博士

PhD (CityU)

Assistant Professor

Dr LEE Wing Yan, Becky

李穎欣博士

PhD (University of Waterloo)
ASA (SOA)

Assistant Professor

Dr YU Chak Yan, Marco

余澤仁博士

PhD (CUHK)

Assistant Professor

Dr YU Kwok Wai, Carisa

余國惠博士

PhD (PolyU)
CStat (RSS)

Assistant Professor

Dr YUEN Fei Lung, Kevin

袁飛龍博士

PhD (HKU)
PGCAP (Heriot-Watt)
ASA (SOA)

Senior Lecturer

Ms WU Yan, Michelle

吳燕女士

MSc (South China University of
Technology)
MSc (The University of Iowa)
FSA (SOA)

Lecturer

Dr LIU Nga Wai, William

廖雅威博士

PhD (University of Rochester)

Lecturer

Ms MO Yee Lam, Elaine

毛怡琳女士

MSc (CUHK)

Lecturer

Mr ZEL Tsz Fung, Stanley

蕭子峯先生

MStat (HKU)



ENQUIRIES ON APPLICATION AND ADMISSION 入學申請查詢

Applicants can submit their applications through the HSMC Online Application System.
For further enquiries, please contact the Registry.
申請者可透過恒生管理學院網上入學申請系統申請。如有進一步查詢，請聯絡本校教務處。

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Facebook	: www.facebook.com/hsmc.dsbi
Programme Email 課程查詢	: dsbi@hsmc.edu.hk
Admission Email 入學查詢	: ugadmission@hsmc.edu.hk
Address 地址	: Hang Shin Link, Siu Lek Yuen, Shatin, NT 新界沙田小瀝源行善里

In case of discrepancy between the English and Chinese versions of the contents of this pamphlet, the English version shall prevail.
本課程簡介內容以英文版本為準，中文譯本僅供參考。

Hang Seng Management College is incorporated in Hong Kong with limited liability by guarantee.
恒生管理學院是一間於香港註冊成立之擔保有限公司。

Information updated as of April 2017.
有關資料更新至2017年4月。

