

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

MESSAGE FROM ACTING PROGRAMME DIRECTOR



Dr CHOY Siu Kai
Acting Programme Director,
BSc-DSBI Programme
Acting Head, Department of Mathematics
and Statistics

數據科學及商業智能學（榮譽）理學士學位
署理課程總監
數學及統計學系署理系主任
蔡少佳博士

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 manage various concerns within the enterprise.

As the 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 staffs from our BSc-DSBI programme, I warmly invite you to explore this enriching and rewarding journey with us.

署理課程總監的話

現代社會瞬息萬變，各行各業都需要處理大量的市場數據。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的培訓，以鞏固行業的領導地位，同時提升整體競爭力。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，我們有信心此課程可培訓出優秀的數據科學家和商業智能學專業人員，以回應市場的需求，並為本港的經濟發展作出貢獻。

我謹代表數據科學及商業智能學（榮譽）理學士課程全人，誠意邀請所有同學加入本課程！

MESSAGE FROM PROGRAMME ADVISORY COMMITTEE MEMBER



Professor 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
唐創時教授

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

商業活動衍生出大量的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。本課程的獨特之處，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。

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，各企業都需要處理數據。
- 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
管理不斷增長的商業數據量。
- A first degree programme in Hong Kong to integrate “Data Science” and “Business Intelligence” with
a comprehensive business education to answer the 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。

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，用以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、整合和演示商業訊息，從而作出商業決策。

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）
- Three major Study Areas: General Education and Generic Skills, Business Education and DSBI Specialty.
課程設有三大學習範疇，分別為「通識教育」、「商學教育」及「數據科學及商業智能學（課程專業）」。
- The number and distribution of core and elective modules are as follows:
必修及選修的單元數目分佈如下：

Study Area 學習範疇	No. of modules (Credits) 單元數目 (學分)	Percentage 百分比
General Education and Generic Skills 通識教育	16 (48)	40.0%
Business Education 商學教育	8 (24)	20.0%
DSBI Specialty 數據科學及商業智能學（課程專業）	11 (33)	27.5%
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

DSBI SPECIALTY

數據科學及商業智能學（課程專業）

- Foundations of Data Science
數據科學基礎
- Probability and Statistical Theory
概率及統計論

BUSINESS EDUCATION 商學教育

- 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

GENERAL EDUCATION & GENERIC SKILLS

通識教育

- 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

DSBI SPECIALTY

數據科學及商業智能學（課程專業）

- 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

BUSINESS EDUCATION 商學教育

- Financial Accounting
財務會計學
- Principles of Marketing
市場學原理

GENERAL EDUCATION & GENERIC SKILLS

通識教育

- 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

DSBI SPECIALTY

數據科學及商業智能學（課程專業）

- 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

BUSINESS EDUCATION 商學教育

- 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

DSBI SPECIALTY

數據科學及商業智能學（課程專業）

- 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 EDUCATION 商學教育

- 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 Qualifications 專業資格

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

本課程教授學生充足的知識，以獲取以下的專業資格：

- Graduate Statistician (GradStat), Hong Kong Statistical Society 香港統計學會
- 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：

- | | | |
|--|--|---|
| • Statistician
統計師 | • Financial Analyst
金融分析師 | • Market Researcher
市場研究員 |
| • Actuary
精算師 | • Financial Planner
財務策劃師 | • Management Trainee
管理培訓生 |
| • Data Scientist
數據科學家 | • Financial Planning Manager
財務策劃經理 | • Marketing Executive Trainee
營銷見習行政人員 |
| • Business Intelligence Professional
商業智能專業人員 | • Financial Consultant
理財顧問 | • Teacher
教師 |

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，供學生學習和練習統計及電腦的應用技能。

Student Exchange Programme 學生海外交流計劃

HSMC has engaged in exchange partnership with the 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 | • HAAGA-HELIA University of Applied Science, Finland |
| • Concordia University, Canada | • Laurea University of Applied Science, Finland |
| • ISIT, France | • International University of Monaco, Monaco |
| • EDC Paris, France | • National Taipei University, Taiwan |
| • Paris Business College, France | • Shanghai University of International Business and Economics, China |
| • University of Rouen, France | • Pukyong National University, South Korea |

Internship Opportunities 實習機會

More than 80 organisations have participated in the internship programme, including Hang Seng Bank, J. P. Mogan, HSBC, Bank of China (HK), and so on.

超過80間機構為本校提供實習機會，包括恒生銀行、摩根大通、匯豐銀行及中國銀行（香港）等。



ACADEMIC STAFF PROFILE

學術團隊

Professor

Prof TANG Man Lai
鄧文禮教授

Acting Dean of the School of Decision Sciences
PhD (UCLA)

Assistant Professor

Dr CHOY Siu Kai
蔡少佳博士

Acting Programme Director
Acting Head
PhD (HKBU)

Assistant Professor

Dr YU Kwok Wai, Carisa
余國惠博士

Associate Programme Director
PhD (PolyU)

Assistant Professor

Dr LAM Shu Yan, Benson
林樹仁博士

Associate Head
PhD (CityU)

Assistant Professor

Dr LEE Wing Yan, Becky
李穎欣博士

PhD (University of Waterloo)

Assistant Professor

Dr LEUNG King Tai, Jacky
梁景泰博士

PhD (HKBU)

Assistant Professor

Dr YIP Wing Han, Iris
葉穎嫻博士

PhD (HKUST)

Senior Lecturer

Ms WU Yan, Michelle
吳燕女士

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

Lecturer

Dr LIU Nga Wai, William
廖雅威博士

PhD (University of Rochester)

Lecturer

Dr YU Chak Yan, Marco
余澤仁博士

Programme Coordinator
PhD (CUHK)

Lecturer

Mr ZEL Tsz Fung, Stanley
蕭子峯先生

MStat (HKU)

Back row (from left to right):

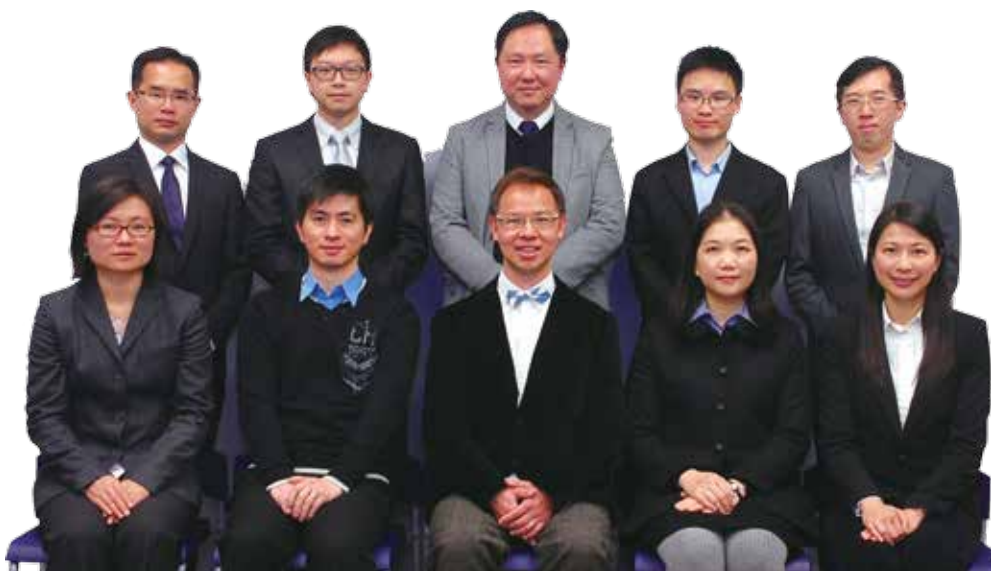
Dr Benson Lam, Dr Jacky Leung, Dr William Liu, Mr Stanley Zel, Dr Marco Yu

後排（由左至右）：林樹仁博士、梁景泰博士、廖雅威博士、蕭子峯先生及余澤仁博士

Front row (from left to right):

Ms Michelle Wu, Dr Choy Siu Kai, Prof Tang Man Lai, Dr Carisa Yu, Dr Iris Yip

前排（由左至右）：吳燕女士、蔡少佳博士、鄧文禮教授、余國惠博士及葉穎嫻博士





ENQUIRIES ON APPLICATION AND ADMISSION

入學申請查詢

Application forms can be downloaded from the HSMC website. For further enquiries, please contact the Registry.
入學申請表可於恒生管理學院網頁下載。如有進一步查詢，請聯絡本校教務處。

Tel 電話	: 3963 5555
Fax 傳真	: 3963 5553
Website 網頁	: www.hsmc.edu.hk
Facebook	: www.facebook.com/hsmc.dsbi
Programme Email	: dsbi@hsmc.edu.hk (課程查詢)
Admission Email	: registry@hsmc.edu.hk (入學查詢)
Address 地址	: Hang Shin Link, Siu Lek Yuen, Shatin, N.T : 新界沙田小瀝源行善里

In case of discrepancy between the English version and Chinese version of the contents of this brochure, the English version shall prevail.

本課程簡介以英文為準，中文譯本謹供參考。

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 October 2014.
有關資料更新至2014年10月。

