



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



數學及統計學系
DEPARTMENT OF MATHEMATICS & STATISTICS
恒生管理學院
HANG SENG MANAGEMENT COLLEGE



Prof TANG Man Lai
Programme Director, BSC-DSBI Programme
Head, Department of Mathematics and
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Associate Dean, School of Decision Sciences

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才，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 CHAIRMAN

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.

課程顧問主席的話

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。



Prof TONG Chong Sze
MA, PhD (Cantab), CMath, CSci, FIMA
Chairman 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
顧問主席
唐創時教授

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才的需求日益增長，期望他們能夠分析和管理的商業數據量。
- 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。

Study Subsidy Scheme for Designated Professions/Sectors (SSSDP)

指定專業/界別課程資助計劃

- Nurture necessary talents in support of specific industries with keen demand
培育切合本港社會及經濟需要之人才
- Provide an annual subsidy upto HK\$40,000 per student (i.e. a subsidy upto HK\$160,000 per student over the 4-year study)
每名學生可獲政府資助學費每學年最高港幣四萬元（四年修業期內將獲合共最高港幣十六萬元資助）
- The subsidised undergraduate programmes are locally-accredited
受資助的本科課程皆通過本地評審

The BSC-DSBI programme is eligible under SSSDP in the discipline “Financial Technology”.

本課程已獲政府選定為屬於「金融科技」界別並納入此資助計劃。

Submit application via JUPAS
必須經JUPAS申請

JUPAS Code
JSSH04

Volatility	Value	Ratio	Net Chg	% Chg
15746.88			+128.66	+0.82%
1770.49 d			+7.52	+0.43%
3931.95			-7.92	-0.20%
13380.41 d			+18.70	+0.14%
40280.09 d			-24.36	-0.06%
53384.60			-447.25	-0.83%
				+10.96%
				-4.26%
				+2.11%
				-6.55%
				+24.84%
				-23.74%
				+0.67%
				-5.63%
				+2.56%
				-23.19%
				-0.38%
				-6.46%
				-24.66%
				+62.89%
				+21.84%



PROGRAMME 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 REQUIREMENT 共通核心科目

- 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

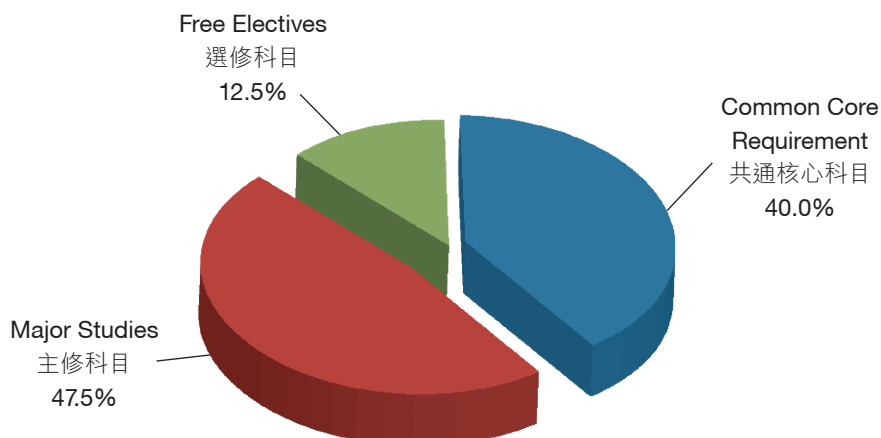
- Quantitative Methods for Business Management
企業管理定量方法
- Business Regression Analysis
商業回歸分析
- Statistical Computing in Practice
電腦統計應用
- Financial Accounting
財務會計學
- Principles of Marketing
市場學原理

COMMON CORE REQUIREMENT 共通核心科目

- 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
- 2 General Education Electives
兩個通識選修科目

PROGRAMME INFORMATION 課程資訊

- 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: Common Core Requirement, Major Studies and Free Electives
設有三大學習範疇：共通核心科目、主修科目及選修科目。
- The distribution of core and electives modules are as follows:
必修及選修單元分佈如下：



課程架構

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

COMMON CORE REQUIREMENT 共通核心科目

- 2 General Education Electives
兩個通識選修科目

FREE ELECTIVES 選修科目

- 3 Free Electives
三個選修科目

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

COMMON CORE REQUIREMENT 共通核心科目

- 2 General Education Electives
兩個通識選修科目

FREE ELECTIVES 選修科目

- 2 Free Electives
兩個選修科目

HIGHLIGHTS OF ELECTIVES 重點選修科目

- 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)

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
- Data Analyst
數據分析師
- Business Intelligence Professional
商業智能專才
- 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 been 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，獲得寶貴的生活經驗。

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



Internship Programme 實習計劃

More than 100 organisations participate in the internship programme. On average over 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，平均每年超過70% BSC-DSBI學生到不同機構實習。

Some of the Participating Organisations :

部分提供實習機會的機構：

- 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
- Regal Hotels International
富豪國際酒店集團
- Pacific BMW (USA)
Pacific BMW (美國)
- DBS Bank (Hong Kong)
星展銀行 (香港)
- A.S. Watson Group
屈臣氏集團
- HKTV
香港電視
- HSBC
滙豐銀行
- Ernst & Young
安永會計師事務所
- Lively Impact Technology Limited

Mentorship Programme 導師計劃

The mentorship programme is organised to help students to establish friendships with professional elites and provide them with a platform to increase their exposure to the industry. A group of professional elites from different industry sectors including Hang Seng Bank, Standard Chartered Bank, Ernst & Young, KPMG, JP Morgan, Accenture and government sectors, and so on are invited to become mentors. 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 the firsthand 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第一手資訊。

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)

Associate Professor

Dr CHOY Siu Kai
蔡少佳博士

Associate Head
PhD (HKBU)

Associate Professor

Dr YU Kwok Wai, Carisa
余國惠博士

Associate Programme Director
PhD (PolyU)
CStat (RSS)

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 YUEN Fei Lung, Kevin
袁飛龍博士

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

Senior Lecturer

Dr LEUNG King Tai, Jacky
梁景泰博士

PhD (HKBU)

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

Submit application via JUPAS.
必須經JUPAS申請。

Tel 電話	: 3963 5004
Website 網頁	: www.hsmc.edu.hk/dsbi
Facebook	: www.facebook.com/hsmc.dsbi
Instagram	: @hsmc.dsbi
Programme Email 課程查詢	: dsbi@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 any 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 October 2017.

有關資料更新至2017年10月。

