計算機科學系 DEPARTMENT OF COMPUTER SCIENCE



香港恒生大學 THE HANG SENG UNIVERSITY OF HONG KONG



## Bachelor of Science (Honours) in APPLIED COMPUTING (BSc-AC) 計算機應用(榮譽)理學士



## BSc (HONS) IN APPLIED COMPUTING (BSc-AC) 計算機應用(榮譽)理學士(BSc-AC)

From Artificial Intelligence (AI) and machine learning to mobile software and cloud technology, from e-commerce and Fintech to user experience design (UXD), new ideas in computer science have become the enabling technologies for modern society and smart cities in the future. However, Hong Kong and the world at large are facing a shortage of relevant technology experts. Our Applied Computing degree programme aims to train computing and IT professionals for various sectors.

#### **Programme Characteristics**

- Include traditional courses of Computer Science such as software development, as well as hot topics such as Artificial Intelligence and Mobile Computing
- Secondary focus on user experience design, graphics and multi-media subjects
- Small class teaching: class size does not exceed 35 students for lab-based modules in general

人工智能、機器學習、流動軟件、雲端科技、電子商貿、金融科技、用 戶體驗設計……未來社會和智慧城市的脈搏,正由一系列源自電腦應用 的新意念所帶動。然而,本港以至環球相關科技人才卻相對缺乏。有見 及此,香港恒生大學計算機科學系開創了一門面向未來的計算機應用理 學士學位課程,以滿足不同界別對電腦及資訊科技人才之渴求。

#### 課程特色

- · 涵括計算機科學(Computer Science)的傳統科目(例如軟件開發),以
  及近年的熱門議題,比如人工智能(Artificial Intelligence)和流動應
  用程式開發(Mobile Computing)等課程
- 輔以用戶體驗設計(User Experience Design)、電腦圖像和多媒體 等學科
- 實施小班教學,技術科目一般不多於35人一班

## PROGRAMME FEATURES 課程特色

BSc-AC is a career-oriented programme that focuses on the essential skills related to software development. The focus is on the practical aspect rather than theoretical. The programme is supplemented by subjects in various application areas.

BSc-AC是一門以職業需求為主導的課程。 課程傳授與軟件開發相關的各種實用技 能。課程強調實際應用而非純理論,並包 括各種應用領域。









Computing and Software Development 電腦學及軟件研發

Software Application Development 程式編寫及軟件開發技巧 • Mobile Application Development 移動軟件開發

 Web Application Development 網站程式開發

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User Experience Design 用戶體驗設計

電脑画隊 ・UX Design 用戶體驗設計

・Multi-media Design 多媒體設計

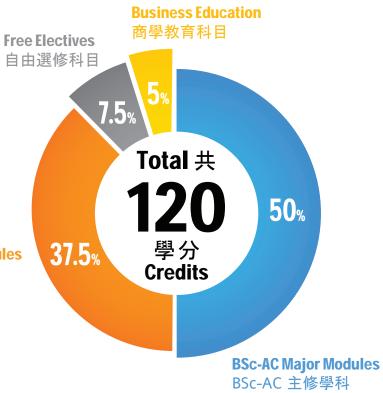
## ACADEMIC OVERVIEW 課程概覽

BSc-AC is a four-year degree programme. Students need to complete a total of 120 credits from a four-year curriculum consisting of Major modules, Common Core modules, Business Education modules and Free Elective modules.

本課程為四年制本科課程。課程結構由主修 科目、共同核心科目、商學教育科目及自由 選修科目所組成。學生須於四年內修讀合共 120學分。

> Common Core Modules 共同核心學科

General education, languages, and mathematics 通識教育, 語文, 數學等



## ADMISSION INFORMATION 入學資訊

## Year-one entry (Local applicants)

- Applications should be submitted via JUPAS (Programme code: JSSH03)
- Possess HKDSE Examination results or equivalent qualifications (HKDSE Results 332A2 or above)
- · Interested in computing and information technology
- · Interviews will be conducted on a selective basis
- Candidates without studying ICT can also apply
- Priorities will be given to qualified candidates who placed this programme in a higher JUPAS programme choice

## 一年級入學 (本地申請者)

- •請透過JUPAS系統申請 (JUPAS Code: JSSH03)
- ・須持有香港中學文憑考試成績或具備同等學歷 (HKDSE成績 332A2或以上)
- 對電腦及資訊科技感興趣
- •申請者或會被邀請面試
- •沒有修讀ICT者亦可申請
- JUPAS課程排列次序較高,而又符合要求者,將優先考慮



## PROGRAMME STRUCTURE 課程架構



#### Major Studies 主修科目

Computer Science 計算機科學

- Programming Methodology
- Programming and Data Structures
- Computer System
- Contemporary Information Technologies

#### Mathematics 數學

- · Linear Algebra and Calculus
- Language and Culture 語文及文化 • Freshman Chinese • University English (I & II)
- Liberal and Social Studies 通識及社會
- General Education 
  Introduction to Business

#### YEAR

YEAR

YEAR

#### Major Studies 主修科目

Computer Science 計算機科學

- Computer Network
- Discrete Mathematics and Algorithms
- Database Design and Management
- Graphic and Digital Design
- Advanced Programming

Language and Culture 語文及文化

- Putonghua for Business 
  English
- Chinese Literature Appreciation
- Liberal and Social Studies 通識及社會
- General Education (x2)
- Principles of Management

#### Major Studies 主修科目

Computer Science and User Experience Design 計算機科學,用戶界面(體驗)設計

- Artificial Intelligence
- Computing Technologies
- in Web Applications Software Engineering
- Human-Computer Interaction
- Major Elective 2

Professionalism and

語文及文化

English

Liberal and Social Studies 通識及社會

 General Education Free Elective

## Major Studies 主修科目

Computer Science and User Experience Design 計算機科學,用戶界面(體驗)設計

- Senior Project (2 semesters)
- User Experience Designs
- Major Elective 3
- Major Elective 4

Liberal and Social Studies 通識及社會 General Education (x3) • Free Elective (x2)  Machine Learning Techniques and Applications

Major Electives 主選修科

- Mobile Computing
- E-commerce Application Development
- Frontiers in Computing
- Introduction to Financial Computing
- Project Management
- Computer Animation for Interactive Content
- Multimedia Design for Organization
- Cognition in Everyday Life
- Digital Humanities and Chinese Computing
- Student Internship

(Any four of the above) (以上選讀四科)

Ethics in Computing Major Elective 1

Language and Culture

## WORDS FROM OUR GRADUATES

畢業生的話

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I chose to study Computing at HSUHK due to the high demand of IT talents and my interests in coding. My study helped me discover different areas within computing technologies, which helped me strengthen all my technical skills. The projects gave me chances to gain practical experiences. The most amazing part of our programme is the endless support from our professors. They always encourage us to ask them questions, no matter if it is about academic, career or personal growth. They gave me valuable suggestions when I was struggling about my future. Technology is the trend in the future, while all the knowledge and words from my professors are the treasures I gained here. Thank you for everything.



"Ai out offi Pro pre The as f

"Aim higher, even if you stumble, you will still perform better than you once did." This motto has guided me throughout my four years at HSUHK. Starting with no programming knowledge, I embraced every opportunity HSUHK offered, serving as the financial secretary of the student association, participating in the HSUHK Local Internship Programme, and leading a research team in Artificial Intelligence Voice Conversion, which culminated in a paper presented at the IEEE World Congress on Computational Intelligence.

Athena Ng, Graduate 吳苡筠 - 畢業生

Quantitative Developer

The ambitious goals I set and the support from HSUHK—through expert guidance from professors and scholarships as financial assistance—were vital to my success. As my journey at HSUHK concludes, I am grateful for these unforget-table experiences that will shape my future.

Martin Lee, Graduate 李傳軒 - 畢業生 Stock Trading System Developer

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## SALARY TREND 薪酬趨勢

IT talents in Hong Kong are in short supply. Young practitioners may enjoy a monthly salary of \$30,000 to \$50,000, while experienced senior professionals could earn up to \$100,000 per month.

香港目前電腦及創新科技人才供不應求,年輕從業員月薪可 達港幣\$30,000至\$50,000,而富經驗的高級專業人員更可達 月入港幣\$100,000。

Mobile Developer (\$30,000 - \$50,000) 行動應用程式工程師 Web Developer (\$50,000 - \$60,000) 網站開發人員 Frontend Developer (\$32,000 - \$45,000) 前端開發人員 Backend Developer (\$30,000 - \$55,000) 後端開發人員 System Analyst (\$45,000 - \$60,000) 系統分析師 Data Scientist (\$65,000 - \$85,000) 數據科學家 R&D Manager (\$85,000 - \$100,000) 研究與開發經理 120.000 20,000 40,000 60,000 80,000 100,000 0 (HKD/Month 港幣 / 每月)

Data source 資料來源: The Adecco Hong Kong Salary Guide 2024

| CAREER | PATHWAYS |
|--------|----------|
| 就業出路   | 各        |

| Software Development<br>軟件開發                 | Software Developer, Software Engineer, System Analyst, IT Consultant, Web Develop-<br>er, Mobile Apps Designer, Entrepreneur<br>軟件開發人員、軟件工程師、系統分析師、資訊科技顧問、網頁開發人員、移動<br>應用程式設計師、企業家 |
|--|--|
| Creative Industry and Multimedia<br>創意產業及多媒體 | Interface Designer, Video Game Developer, Computer Graphic Designer, Multi-<br>media Content Developer<br>界面設計師、遊戲開發人員、圖像設計師、多媒體內容開發人員   |
| Business IT Solution                         | Solution Architect, Business Analyst   |
| 商業IT方案                                       | 方案架構師、商業分析師  |
| Project Management (IT)                      | IT Project Manager   |
| 項目管理 (IT)                                    | 資訊科技專案經理   |
| User Experience Design                       | User Experience Designer   |
| 用戶體驗設計                                       | 用戶體驗設計師  |



## COMPUTING FACILITIES 電腦設施

We provide state-of-the-art computing laboratories and facilities for our students. Some of the facilities the students may enjoy include:

我們提供多個尖端電腦實驗室給同學使用,其中包括:

- Decision Science Laboratory 決策科學科技實驗室
- VR Centre VR and Big Data Analytics Laboratory 虛擬實境及大數據分析研究實驗室
- IT Learning Centre 資訊科技學習中心
- Applied Statistics Laboratory 應用統計實驗室
- Multi-media Laboratory
  多媒體教室

Additionally, multiple computing laboratories are available for students in every academic building on campus, including laboratories that are open 24 hours a day.

此外,每座教學大樓均設有多個電腦實驗室供同學使用,部分更為24小時開放。

## INTERNSHIP PROGRAMME 實習計劃

The programme includes a Student Internship credit-bearing elective module. Successfully enrolled students may receive on-the-job trainings from our industrial partners during summers. Internship projects help students put textbook knowledge into practice, making the learning experience even more rewarding and challenging. Some of the internship opportunities include:

本課程設有學生實習計劃,並設為一門選修科目供同學選擇。在此計劃下、成功取 錄的同學可以在暑期間前往不同機構賺取寶貴的工作經驗,為將來做好準備,完成 實習後更可以獲取相關學分。過去部分實習機會包括:

- IBM
- •NetDragon Websoft 網龍
- Caching Technology Limited
- Vico Capital Limited
- ・WWF Hong Kong 世界自然基金會 (香港)
- Ernst & Young 安永
- IT Channel
- HKSAR Fire Services Department 香港消防處

#### • Hang Seng Bank 恒生銀行

- eClass
- YMCA
- DECENT
- ZynerSoft
- •Hong Kong Observatory 香港天文台
- Top Level
- MTR

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## SCHOLARSHIPS 獎學金

- Entrance Scholarship 入學獎學金
- Dean's Award 院長入學獎學金
- Academic Excellence Scholarship 卓越學業獎學金
- eClass Scholarship in Applied Computing\* eClass計算機應用獎學金\*
- · Overseas Learning Scholarships / Awards & Subsidies 海外學習獎學金 / 獎項及資助
- Self-financing Post-secondary Scholarship Scheme (SPSS) 自資專上獎學金計劃
- HSBC Hong Kong Scholarship 匯豐香港獎學金

\* This scholarship is only available for Year 3 and Year 4 students of the programme 該獎學金只供本課程三年級及四年級學生申請





## CAMPUS LIFE 校園生活

The Hang Seng University of Hong Kong (HSUHK) has been developing rapidly. The campus is equipped with brand-new facilities, including computers, sports and accommodation facilities.

香港恒生大學發展迅速,並設有全新的校園設施,包括多項電腦、體 育和住宿設施。

The HSUHK Jockey Club Residential Colleges with 1,200 places benefit students of the dynamic and inspiring hall life education programmes offered at HSUHK. In addition to the Residential Colleges, 206 places are provided at the Old Hall where residents can enjoy residential life.

香港恒生大學賽馬會住宿書院提供1,200個宿位,加上原有可提供206 個宿位的元舍堂,可讓更多同學享受充滿活力的宿舍生活。

## STUDENT EXCHANGE PROGRAMME 學生交流計劃

We encourage our students to take part in our Student Exchange Programme, which allows the selected students to spend one semester in higher education institutions around the world. In the past few years, students from our department have embarked on fruitful exchange journeys to Asia Pacific and Europe.

我們與世界各地高等學府合作,讓同學到不同國家及地區進行長達一個學期之交流學習,擴闊視野。過去幾年,本 系同學成功派往亞太及歐洲等地。

#### Asia-Pacific 亞太區

- Western Sydney University, Australia
- Australian Catholic University, Australia
- Tsinghua University, China
- Nanzan University, Japan
- Osaka International University, Japan
- Pukyong National University, South Korea
- National Taiwan University, Taiwan
- National Taipei University of Technology, Taiwan

## EUROPE 歐洲

- University of Applied Sciences BFI Vienna, Austria
- University of East Paris, France
- SRH University Heidelberg, Germany
- University of Adger, Norway
- Laurea University of Applied Sciences, Finland
- Amsterdam University of Applied Sciences, the Netherlands
- Stockholm University, Sweden
- University of Huddersfield, UK

## NORTH AMERICA 北美洲

- Concordia University, Canada
- Illinois Wesleyan University, USA
- Susquehanna University, USA

The experience of studying in University of Agder had allowed me to discover who I am. Besides, I have become more independent and better at problem solving as there were a lot of issues that I had to face alone without others' help. Overall, my exchange experience has contributed a lot to my personal growth.



CHAN Cheuk Long 陳卓朗 University of Agder, Norway (Student Exchange Programme)







## ENQUIRIES ON APPLICATION AND ADMISSION 入學申請查詢

#### Year 1 Entry

Local applicants should apply through the Joint University Programmes Admissions System (JUPAS). Applicants should obtain HKDSE examination results which meet the general entrance requirements, or possess equivalent qualifications. JUPAS code: JSSH03

#### 入讀一年級

本地申請者應透過「大學聯合招生辦法」申請。申請者須於香港中學文憑考試取得符合一般入學條件的成績, 或具備同等學歷。JUPAS code: JSSH03

#### Year 3 Entry

Applicants can submit their applications through the HSUHK Undergraduate Application System. Applicants should have completed an Associate Degree or Higher Diploma in a related discipline.

#### 入讀三年級 申請者可透過恒生大學網上入學申請系統申請。申請者須修畢相關學科的副學士或高級文憑課程。

Information for Non-local Applicants 非本地生資訊 Applicants with International Qualifications 國際學歷申請人: https://admission.hsu.edu.hk/undergraduate-admissions/year-1-entry/international-qualification/apply-here3/non-local-applicants/

Applicants with Mainland Qualifications 內地學歷申請人: https://registry.hsu.edu.hk/hk/prospective-students/undergraduate/jee/

| Tel 電話               | : 3963 5710                             |
|----------------------|---|
| Fax 傳真               | : 3963 5553                             |
| Website 網頁           | : https://cs.hsu.edu.hk                 |
| Programme Email 課程查詢 | : ac@hsu.edu.hk                         |
| Admission Email 入學查詢 | : ugadmission@hsu.edu.hk                |
| Address 地址           | : Hang Shin Link, Siu Lek Yuen, Shatin, |
|                      | 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。

The Hang Seng University of Hong Kong is incorporated in Hong Kong with limited liability by guarantee. 香港恒生大學是一間於香港註冊成立之擔保有限公司。



Information updated as of October 2024. 有關資料更新至2024年10月。 QF Level: 5 QR Registration No.: 21/000430/L5 Registration Validity Period: 01/09/2021 to 31/08/2026