Major Program Selection Information

Information Systems – An enriching path of study and career

20th September 2023 (Wednesday)
Our IS Alumni

Katie Wong

• BBA(IS, FINA) Class of 2023 Graduate, HKUST
• Third Prize in Huawei ICT Competition
• Hackathon winner (provided AI solution prototype)
• IS Academic Achievement Award, IS Outstanding Service Award
Our IS Outstanding Student

Andrew Chan Gachun

• BBA(IS, ECON, Big Data)

• HSBC InnoTech Scholarship

• IS Academic Achievement Award
What is BBA in Information Systems?

The first question comes to your head
Program Highlights

• Master state-of-the-art and leading-edge technologies in the industry

• Strategic application of IT in a business

• Integrate IT knowledge to provide innovative business solutions
• Prepare students for professional qualifications

• Application of IT management knowledge in real business projects

• Opportunities to join professional 1-year or vacation internship programs

• Specialization option in Business Analytics (BA)

• Specialization option in Information Systems Auditing (ISA)
Career Choices

Flexible structure and career choices with multiple streams of career paths

e.g.

- FinTech
- Cyber Security
- Crypto Currency and Blockchain
- IS Auditing and Security
- IT Consultant
- Network Management
- Digital Economy
- Technology and Innovation Management
- Technology Entrepreneurship
- AI & Machine Learning
- Big Data and Business Analytics and Business Intelligence
- IT Risk Management
- Social Media & E-Commerce
- Business Analysis and Consulting in IS Development, Management, and Business Integration
IS? IT? What if...?

You must have some concerns
Common Concerns

Information Systems in Business – BBA(IS) vs. Computer Science in Engineering – BEng(CS)

Business-oriented training vs. Technology-oriented training

Prior Computer / programming knowledge
Prior HKCEE CS / IT or HKALE CS / CA knowledge
BEng(CS) vs. BBA(IS)

- **BEng(CS)**
  - Emphasizes technical aspects of hardware and software design, i.e., how to develop the tools
  - Mathematical analysis of algorithms and theories of computing

- **BBA(IS)**
  - On top of technical knowledge, BBA(IS) emphasizes the application of computing technologies in businesses, i.e., how to apply and manage the tools
  - The ability to understand and apply appropriate technologies to solve business or organizational problems, or to advise those who supervise such activities
  - More interaction with end-users
Prior Knowledge

• Prior programming or IT background is not required

• The BBA(IS) program does not assume students have prior computer knowledge in:
  • Programming
  • Networking
  • Database
Okay! Could you tell me what will I learn?

Courses? Focuses?
<table>
<thead>
<tr>
<th>First / Second Year</th>
<th>Third / Fourth Year</th>
<th>University Common Core</th>
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</thead>
<tbody>
<tr>
<td>• University Common Core</td>
<td>IS Electives (minimum 10 credits)</td>
<td>School Requirements</td>
</tr>
<tr>
<td>• University Language Requirements</td>
<td>• Data Mining for Business Analytics</td>
<td>Free Electives</td>
</tr>
<tr>
<td>• School Requirements</td>
<td>• FinTech and Cryptoventures</td>
<td>• Any courses offered by any department; or</td>
</tr>
<tr>
<td>IS Required Courses (10 credits)</td>
<td>• Developing AI Applications</td>
<td>• Take all the necessary courses of another business program to claim an additional major</td>
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<tr>
<td>• Business Applications Development in Java <em>or</em></td>
<td>• Data Visualization &amp; Visual Analytics</td>
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<tr>
<td>Business Applications Development in Python</td>
<td>• Innovation Management &amp; Technology Entrepreneurship</td>
<td></td>
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<tr>
<td>• IS Analysis and Design</td>
<td>• e-Business Management and Web Analytics</td>
<td></td>
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<tr>
<td>• Database Design &amp; Administration</td>
<td>• Business Programming in R</td>
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<td></td>
<td>• IS Auditing</td>
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<td></td>
<td>• IS Control and Assurance</td>
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<td></td>
<td>• Big Data Technologies</td>
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<td></td>
<td>• Information Systems Project Management</td>
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<td></td>
<td>• Telecom &amp; Computer Networking Management</td>
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<td></td>
<td>• Advanced Network Management</td>
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<td></td>
<td>• Internet Applications Development</td>
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<td></td>
<td>• Natural Language Processing in Business using Deep Learning</td>
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<td></td>
<td>• Final Year Project</td>
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### For 2022-23 & after Intake Students

#### 1st & 2nd Year Fall
- **University Common Core**
- **University Language Requirements**
- **School Requirements**

#### 2nd Year Spring & 3rd Year Fall
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOM3210</td>
<td>IS Analysis &amp; Design (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3320</td>
<td>Business Applications Development in Java (3), or</td>
<td></td>
</tr>
<tr>
<td>ISOM3400</td>
<td>Business Applications Development in Python (3)</td>
<td></td>
</tr>
<tr>
<td>MGMT2130, ISOM- -IS, FREE</td>
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</tbody>
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#### 3rd Year Spring
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOM3260</td>
<td>Database Design &amp; Administration (4)</td>
<td></td>
</tr>
<tr>
<td>LABU2040, LABU2060, ISOM-IS, Common Core, FREE</td>
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</tbody>
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#### 4th Year Fall
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ISOM-IS, Common Core , FREE</td>
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#### 4th Year Spring
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Common Core , FREE</td>
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### IS Elective Courses Available
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ISOM3010</td>
<td>Information Systems Project Management (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3180</td>
<td>Telecom &amp; Computer Networking Management (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3340</td>
<td>Developing AI Applications (1)</td>
<td></td>
</tr>
<tr>
<td>ISOM3330</td>
<td>Data Visualization &amp; Visual Analytics (1)</td>
<td></td>
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<tr>
<td>ISOM3310</td>
<td>e-Business Management &amp; Web Analytics (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3320</td>
<td>Business Applications Development in Java (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3350</td>
<td>FinTech and Cryptoventure (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3360</td>
<td>Data Mining for Business Analytics (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3370</td>
<td>Big Data Technologies (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3380</td>
<td>Advanced Network Management Cisco - ICND (4)</td>
<td></td>
</tr>
<tr>
<td>ISOM3390</td>
<td>Business Programming in R (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM3400</td>
<td>Business Applications Development in Python (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM4020</td>
<td>Innovation Management &amp; Technology Entrepreneurship (3)</td>
<td></td>
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<tr>
<td>ISOM4100</td>
<td>IS Auditing (3)</td>
<td></td>
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<tr>
<td>ISOM4200</td>
<td>Information and Cyber Security Management (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM4300</td>
<td>IS Control &amp; Assurance (3)</td>
<td></td>
</tr>
<tr>
<td>ISOM4030</td>
<td>Natural Language Processing in Business using Deep Learning (3)</td>
<td></td>
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<tr>
<td>ISOM4400</td>
<td>IS Project (6)</td>
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Apart from study…

Enrichment doesn’t stop here
Industry Collaborations

- Collaborations with companies for internship programs and final year projects
Industry Collaborations

The offering of *Cisco* courses in collaboration with Cisco Systems’ Network Academy Program (CNAP)

- Network Administrator (CCNA) and
- Cisco Certified Network Professional (CCNP) examinations

![Cisco Certificate Award Ceremony](image)
Industry Recognition for Excellence

• In 2016, IS students won Information Systems Audit and Control Association (ISACA) first case competition on “Internet of Things”

• In 2017, competition on “Cybersecurity”, IS students won both first and runner-up awards.

• In 2018, competition on “FinTech”, IS students won runner-up award.

• Competitions were part of the “International IT Festival” organized by Office of the HKSAR Government Chief Information Officer.
Industry Recognition for Excellence

- In 2021-22, The PMI Hong Kong Chapter Project Management Case Competition BBA IS students won the Distinction Project and Merit Award. One of the team member won the Best Project Manager Award.
- BBA IS Year 2 student (CHAN, Andrew Gachun 陳加駿) won the Innovation and Technology scholarship.
One Year or One Term Internship

• For students who have completed 3rd year of study

• Selected students are granted 1-year/1-term leave to join companies as student interns in IS functions

• Around 69 IS Major students took up internship in last academic year

• To get a sense of what an IS career is all about and fine-tune career goal

• To gain practical work experience not available in classroom, and enrich graduation CV
Exposure in Industries
• An internship information session will be organized every year in Spring term
• We welcome our senior year students to share their internship experiences.

<table>
<thead>
<tr>
<th>Some of the Work Placements</th>
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<tbody>
<tr>
<td>Alibaba</td>
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<tr>
<td>Deloitte</td>
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<tr>
<td>Hang Seng Bank</td>
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<tr>
<td>HKMA</td>
</tr>
<tr>
<td>HSBC</td>
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<tr>
<td>ICBC</td>
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</table>
• To equip students for their future career, the IS program provides opportunities for students to complete a year-long project in a real business setting for an external company during their final year of study.

• By bridging the classroom and corporate workplace, students are given the opportunities to integrate their IS knowledge and advance IS research in a real-life business.
Employers’ Feedback

• “Have versatile technical skills. Communicate effectively with users and IT community.”

• “Logical thinking. Good technical background. Fast adaptation to new environment.”

• “Good in UNIX and SQL. Good in Quality Programming. Creative thinking.”

• “Excellent problem solving skills.”

• “Good coordination and communication skills. Able to raise ideas in order to do the task in effective and accurate way.”
Sounds great! So will I be a professional?

This is not only a just typical bachelor degree
Specialization Option in Business Analytics

IS Major Required Courses

• ISOM3210 Information Systems Analysis and Design
• ISOM3320 Business Applications Development in Java OR ISOM3400 Business Applications Development in Python (2022-23 intake and after)
• ISOM3260 Database Design and Administration

Option Required Courses

• ISOM3360 Data Mining for Business Analytics
• ISOM3900 Decision Analytics

Recommended IS Electives (total 10 credits)

• ISOM3310 e-Business Management and Web Analytics
• ISOM3320 Business Applications Development in Java (if you do not take it as IS required course)
• ISOM3370 Big Data Technologies
• ISOM3390 Business Programming in R
• ISOM3400 Business Applications Development in Python (if you do not take it as IS required course)
• ISOM4400 Information Systems Project (with a Business Analytics theme)

(Note: Courses taken as Option Required Courses cannot be counted towards the IS elective requirement.)
Specialization option in IS Auditing

IS Major Required Courses

- ISOM3210 Information Systems Analysis and Design
- ISOM3320 Business Applications Development in Java OR ISOM3400 Business Applications Development in Python (2022-23 and after)
- ISOM3260 Database Design and Administration

Option Required Courses

- **ISOM4100 Information Systems Auditing
- **ISOM4300 Information Systems Control and Assurance

Recommended IS Electives Courses (total 10 credits)


(Note: Courses taken as Option Required Courses **cannot** be counted towards the IS elective requirement.)

**Students can take ISOM 4100 & ISOM 4300 in any order and there is no pre-requisite requirement for these two courses.**
Most of the IT Auditor will do Dual professional qualifications in CISA and CPA
PROFESSIONAL EXAM - CISA
CISA (Certified Information System Auditor)

(Reference website: https://www.isaca.org/credentialing/cisa)

- ISOM3210 (offered in Fall & Spring)
  - ISOM3260 (offered in Fall & Spring)
  - ISOM3180 (offered in Fall & Spring)
  - ISOM3380 (offered in Spring)
- **ISOM4100 (offered in Fall/Winter)**
- **ISOM4300 (offered in Fall & Spring)**

- Students who pass CISA exam, IS program will subsidies half of the exam fees.

*Note: course offering given above are tentative and may be subject to change*

**Students’ can take ISOM 4100 & ISOM 4300 in any order and there is no pre-requisite requirement for these two courses.*
Career Prospects

IT Audit, Control and Security

• Project management
• Independent Consultant
• IT risk management
• Security analyst
• IT Auditor

• IT Audit - **Dual** professional qualification in CISA and CPA (For IT Auditor Hired by CPA Firm)
• 1st ISACA student group in Greater China.

• The opportunity to have close contact with ISACA Hongkong Chapter.

• Networking with Senior Executives.
Professional Exam preparation

CCNA (CISCO Certified Network Associate)


- ISOM3180 (offered in Fall & Spring)
- ISOM3380 (offered in Spring)

OCA (Oracle Certified Associate)


- ISOM3260 (offered in Fall & Spring)

Note: course offering given above are tentative and may be subject to change
IS Department Awards

**IS Academic Achievement Award**

- To recognize BBA-IS students with excellent academic performance.
- Students do not need to apply for the IS AA Award. The department will shortlist eligible candidates and contact them for interview.

**IS Outstanding Service Award**

- To encourage students to engage in the IS profession and recognize students who demonstrate significant contributions to the IS communities in HKUST and beyond.
- The applicant needs to fill in an application form, including a summary of services and a personal statement to explain the details of the contributions, and submit the documents by 31 March each year.

**IS Student Ambassadors**

- Recognition to IS students Ambassadors.

Q&A session
Further Information

- Department website at [http://www.bm.ust.hk/isom](http://www.bm.ust.hk/isom)

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- Assistant Manager: Hayli LAU, [imhlau@ust.hk](mailto:imhlau@ust.hk)

- Program Assistant: IEONG Chao, [imcyeung@ust.hk](mailto:imcyeung@ust.hk)

- For further inquiries about the BBA-IS program, please email to [bbais@ust.hk](mailto:bbais@ust.hk)