Major Program Selection Information

Information Systems – An enriching path of study and career

Benjamin Huber

- *BBA(IS) Class of 2016 Graduate, HKUST*

- *CyberOps Consultant at Horangi*

- *World No. 1 in 2014 June CISA Exam*

- *Specialties : Risk Management, Networking Security, Business Analysis, IT Audit*

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

Program Highlights

- Prepare students for professional qualifications

- Application of IT management knowledge in real business projects

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

- Curriculum aligned with ISACA Mode Curriculum

- *Specialization option in Business Analytics*

- *Specialization option in Information Systems Auditing*

Career Choices

Flexible structure and career choices with multiple streams of career paths – e.g.

- *FinTech*
- *Cyber Security*
- *IS Auditing and Security*
- *IT Consultant*
- *Technology and Innovation Management*
- *Technology Entrepreneurship*
- *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?

For 17 – 18 Intake Students

First / Second Year	Third / Fourth Year	
• **University Common Core** • **University English Language Requirement** • **School Requirements**	**IS Required Courses (10 credits)** • Business Applications Programming or Internet Applications Development or Data Mining for Business Analytics • IS Analysis and Design • Database Design & Administration **IS Electives (minimum 10 credits)** • Python Programming for Business Analytics • FinTech and Cryptoventures • Innovation Management & Technology Entrepreneurship • e-Business Management and Web Analytics • Business Programming in R • IS Auditing • IS Control and Assurance • Big Data Technologies • Information Systems Project Management • Telecom & Computer Networking Management • Advanced Network Management • Internet Applications Development • Final Year Project	**University Common Core** **School Requirements** **Free Electives** • Any courses offered by any department; or • Take all the necessary courses of another business program to claim an additional major

For 17 – 18 Intake Students

1st & 2nd Year Fall

- University Common Core   - University English Language Requirement   - School Requirements

2nd Year Spring & 3rd Year Fall

ISOM3210	IS Analysis & Design (3)
ISOM3230	Business Applications Programming (3), or
ISOM3320	Internet Applications Development (4) (winter semester), or
ISOM3360	Data Mining for Business Analytics (3)

MGMT2130 (2) , ISOM-IS (3), FREE

3rd Year Spring

ISOM3260   Database Design & Administration (4)

LABU2040 (3), LABU2060 (3), ISOM-IS (3), Common Core (3), FREE

4th Year Fall

ISOM-IS (4), Common Core , FREE

4th Year Spring

Common Core , FREE

IS Elective Courses Available

ISOM3010 Information Systems Project Management (3)
ISOM3100 Business Simulation & Strategic Decisions (3)
ISOM3180 Telecom & Computer Networking Management (3)
ISOM3310 e-Business Management & Web Analytics (3)
ISOM3320 Internet Applications Development (4)
ISOM3350 FinTech and Cryptoventures (3)
ISOM3360 Data Mining for Business Analytics (3)
ISOM3370 Big Data Technologies (3)

ISOM3380 Advanced Network Management Cisco - ICND (4)
ISOM3390 Business Programming in R (3)
ISOM3400 Python Programming for Business Analytics (3)
ISOM4020 Innovation Management & Technology Entrepreneurship (3)
ISOM4100 IS Auditing (3)
ISOM4200 Information and Cyber Security Management (3)
ISOM4300 IS Control & Assurance (3)
ISOM4400 IS Project (6)

For 18 – 19 and after Intake Students

First / Second Year	Third / Fourth Year	
• **University Common Core** • **University English Language Requirement** • **School Requirements**	**IS Required Courses (10 credits)** • Business Applications Programming or Internet Applications Development or Python Programming for Business Analytics • IS Analysis and Design • Database Design & Administration **IS Electives (minimum 10 credits)** • Data Mining for Business Analytics • FinTech and Cryptoventures • Innovation Management & Technology Entrepreneurship • e-Business Management and Web Analytics • Business Programming in R • IS Auditing • IS Control and Assurance • Big Data Technologies • Information Systems Project Management • Telecom & Computer Networking Management • Advanced Network Management • Internet Applications Development • Final Year Project	**University Common Core** **School Requirements** **Free Electives** • Any courses offered by any department; or • Take all the necessary courses of another business program to claim an additional major

For 18 – 19 and after Intake Students

1st & 2nd Year Fall

- University Common Core   - University English Language Requirement   - School Requirements

2nd Year Spring & 3rd Year Fall

ISOM3210   IS Analysis & Design (3)
ISOM3230   Business Applications Programming (3), or
ISOM3320   Internet Applications Development (4) (winter semester), or
ISOM3400   Python Programming for Business Analytics (3)
MGMT2130 (2) , ISOM-IS (3), FREE

3rd Year Spring

ISOM3260   Database Design & Administration (4)
LABU2020 (2), ISOM-IS (3), Common Core (3), FREE

4th Year Fall

ISOM-IS (4), Common Core , FREE

4th Year Spring

Common Core , FREE

IS Elective Courses Available

ISOM3010 Information Systems Project Management (3)
ISOM3100 Business Simulation & Strategic Decisions (3)
ISOM3180 Telecom & Computer Networking Management (3)
ISOM3310 e-Business Management & Web Analytics (3)
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ISOM4200 Information and Cyber Security Management (3)
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ISOM4400 IS Project (6)

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

Apart from study…

Enrichment doesn't stop here

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 Collaborations

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

- **Aligned** with the ISACA Model Curriculum

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 40 IS 1st 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

Final Year Project

- 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

- ISOM3230 Business Applications Programming **or** ISOM3320 Internet Applications Development

- 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 Internet Applications Development *(if you do not take it as IS required course)*

- ISOM3370 Big Data Technologies

- ISOM3390 Business Programming in R

- ISOM3400 Python Programming for Business Analytics *(if you do not take it as IS required course for 2018-19 intake & after)*

- 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

- ISOM3230 Business Applications Programming
    - OR ISOM3320 Internet Applications Development
    - OR ISOM3360 Data Mining for Business Analytics *(for 2017-18 intake and before)*; OR ISOM3400 Python Programming for Business Analytics *(for 2018-19 intake 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)**

- ISOM3180 – Telecommunication and Computer Networking Mgt.

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

Program is in **Alignment** with
ISACA Model Curriculum for Information Systems Major

Career Perspectives – *IS Auditing*

Professional Accounting	→ CPA
Finance	→ CFA
Information Systems	→ **CISA**
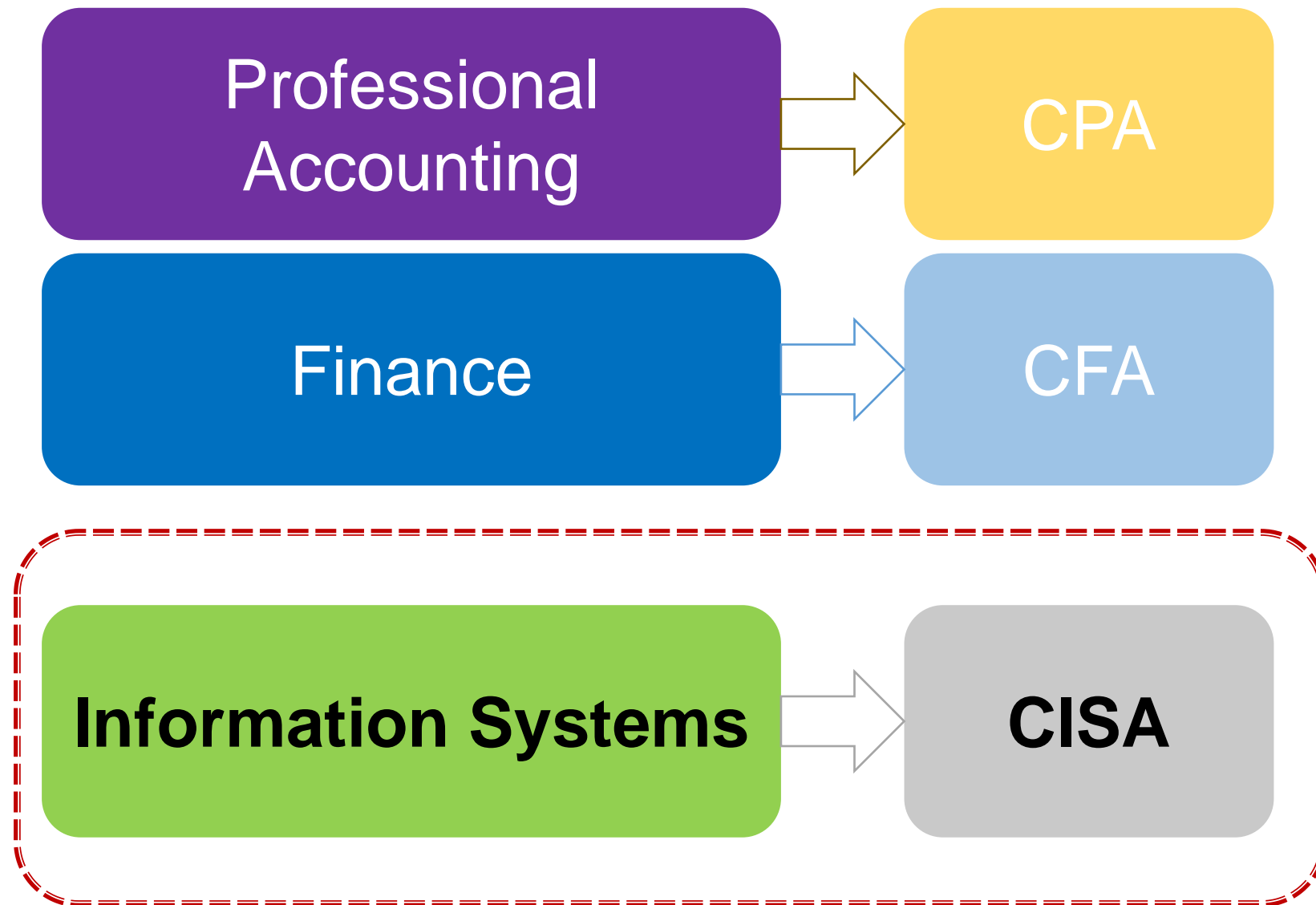
HKUST BBA – IS Program is 1st program in Asia Pacific that is aligned with the ISACA Model Curriculum; courses are designed to help students gain essential knowledge to be Certified Information Systems Auditor (CISA), students can also get 3-4 years' of experience waiver to be certified IS auditor.

IT Auditor is a Dual professional qualifications in CISA and CPA (For IT auditors hired by CPA Firms)

CISA Certified Information Systems Auditor®
An ISACA® Certification

ISACA®
Trust in, and value from, information systems

CISA Designation

How can I complete the ISACA model curriculum?

- **To complete the ISACA model curriculum, except the 3 IS major required courses, another 3 courses you need to take:**
- ISOM 3180 - Telecommunications & Computer Networking Management (3 credits)
- ISOM 4300 - IS Control and Assurance (3 credits)
- ISOM 4100 - IS Auditing (3 credits)

	Fall	Winter	Spring
ISOM3180	√		√
ISOM4300			√
ISOM4100	√	√	

The 3 courses can be counted as IS electives, so you only need to take one more IS elective (to make up at least 10 credits) to fulfill the IS major requirements.
(Note: NOT applicable to students in ISA Option as ISOM4300 and ISOM4100 will be counted as Option Required 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)

Hey! What? When? How? Why? Where?

Q&A session

Further Information

- Department website at http://www.bm.ust.hk/isom

- UG Coordinator: percy@ust.hk, LSK Rm 4037, phone: 2358 7654

- UG Program Assistant: imkevin@ust.hk, phone: 2358 7653

- For further inquiries about the BBA-IS program, please email to bbais@ust.hk

- ISACA Model Curriculum website at http://www.bm.ust.hk/isom/isaudit

- For further inquiries about the ISACA Model Curriculum, please email to isaudit@ust.hk