

COMMITTEE ON UNDERGRADUATE STUDIES

Paper for: Discussion

Title: **Integrated Bachelor-Master Pathways**

Purpose: To consider the general framework for integrated Bachelor-Master pathways based on a recent initiative (BSc RMBI + MScFinTech) approved by the Committee on Postgraduate Studies

Prepared by: CUS Secretariat

BACKGROUND

1. At the 167<sup>th</sup> Committee on Undergraduate Studies (CUS) meeting, the Chair gave an oral report on the Co-terminal Degree 4+1 Pathway proposal, which was shared by the Committee on Postgraduate Studies (CPS). Under this initiative, a special admission pathway is created for selected undergraduate students from the Bachelor of Science Program in Risk Management and Business Intelligence (BSc RMBI) to start taking Master of Science Program in Financial Technology (MSc FinTech) courses in their final year, and be admitted to MSc FinTech as full-time students in the following year with credit transfer.

2. Since the proposal did not involve any changes to the curriculum structure, admission requirements, and the award of diploma of the BSc RMBI program, the Chair reported the initiative for Members' reference. No further discussion on the matter was undertaken by CUS then.

3. CPS at its 168<sup>th</sup> meeting on 13 January 2021 approved the proposal subject to the condition that a more appropriate title, e.g., "dual degree opportunity", be adopted to accurately reflect the fact that student would complete their BSc RMBI and MSc FinTech degrees sequentially. The title Dual Degree 4+1 Pathway (BSc RMBI + MSc Fintech) was eventually adopted.

INTEGRATED BACHELOR-MASTER PATHWAYS

4. Given the flexibility of the BSc RMBI + MSc Fintech proposal, the possibility for extending the framework to similar offerings in the future was discussed at the Deans' meeting on 9 February 2021. Input collected by Deans/IPO from respective units indicate that:

- (a) There is general support for the initiative as it aligns with the University's trimodal framework and can serve as an incentive to attract local students to pursue a postgraduate degree. It is suggested that the offering should be on a selected basis (as with Extended Majors). Cross-School and CWB-GZ pathways appear to have greater interest and attractiveness;

- (b) It appears to be most pragmatic to offer “accelerated admission” to the postgraduate program in the 3<sup>rd</sup> year of undergraduate study (like RMBI + FinTech), based on selection criteria and quotas. Students would then be able to plan their study accordingly, possibly taking postgraduate courses in their senior year and benefiting by earlier admission, earlier graduation, and/or discounted fees for the taught postgraduate program;
- (c) While there are points on favor of a “3+2” pathway, a “4+1” pathway has broader appeal. It is also administratively simpler because students can fall back to graduating with only an undergraduate degree;
- (d) In the future, the University may consider offering one or two combinations on trial basis for entry-level admission offer with JUPAS code; and
- (e) To name the framework “Integrated Bachelor-Master Pathways” as “Dual Degree” has other connotations.

5. In order to consider the proposal from the perspective of all stakeholders, the “Integrated Bachelor-Master Pathways” framework is brought up to the CUS for discussion. A summary of the BSc RMBI + MSc Fintech proposal is presented in the Appendix for members’ reference.

#### ACTION SOUGHT

6. CUS members are invited to share their views, consider any potential drawbacks and pitfalls regarding the “Integrated Bachelor-Master Pathways” by making reference to the summary of the BSc RMBI + MSc Fintech proposal presented in the Appendix.

### **Summary of Co-terminal Degree 4+1 Pathway (BSc RMBI + MSc FinTech)**

1. The Master of Science Program in Financial Technology (MSc FinTech) was launched in 2019/20 jointly by the Schools of Science (SSCI), Engineering (SENG), and Business and Management (SBM). Students are required to complete 30 credits of coursework, including 16 credits of core courses and 14 credits of elective courses, in one-year full-time or two-year part-time mode of study. The program admitted 57 and 64 students respectively in the first two cohorts.
2. To broaden student diversity and retain locally-educated talents to pursue FinTech study, the Schools propose introducing a Co-terminal Degree 4+1 Pathway (BSc RMBI + MSc FinTech) from the Fall Term, 2023/24 intake cohort, which is a special admission pathway for selected undergraduate students from the Bachelor of Science Program in Risk Management and Business Intelligence (BSc RMBI) to start taking MSc FinTech courses in their final year, and be admitted to MSc FinTech as full-time students in the following year with credit transfer.
3. The proposed admission pathway targets BSc RMBI students who are well educated in mathematics, computing, finance, and operations and risks, all being important constituent subjects for FinTech. Streaming these students to MSc FinTech will allow them to allocate more time to co-curricular activities in MSc FinTech such as overseas exchange and internships.
4. The Schools anticipate that adding such a co-terminal BSc + MSc degree pathway in FinTech will help HKUST become a leading powerhouse in FinTech education, and establish BSc RMBI and MSc FinTech as flagship FinTech programs in Asia. It will also help identify and nurture more FinTech talents for the local economy.
5. A summary of the BSc RMBI and MSc FinTech proposal is provided in the table below. The impact of the proposal on the BSc RMBI's curriculum is presented in the [Attachment](#).

	<b>Proposed Co-terminal Degree 4+1 Pathway (BSc RMBI + MSc FinTech)</b>	<b>Regular Admission Pathway (for reference)</b>
Admission Requirements:	- Follow the University's general and English admission requirements	
Additional Selection Criteria:	- Programming and mathematics background is preferred. - Satisfactory GMAT or GRE score is highly recommended. - No minimum work experience required for full-time applicants, and at least two years of full-time post-qualification work experience is highly recommended for part-time applicants.	
	- BSc RMBI students in Year 3 or above (from 2019/20 cohort) - Not opted for FinTech Option in BSc RMBI - CGA: 3.3 or above - Completed at least 100 UG credits (incl. transferred credits)	

Admission Process:	<ul style="list-style-type: none"> <li>- BSc RMBI students to apply in Year 3</li> <li>- Successful applicants will receive an early conditional offer before Year 4 and accept offer by settling a deposit</li> </ul>	<ul style="list-style-type: none"> <li>- UG students to apply in final year</li> <li>- Successful applicants will receive a conditional offer before graduation and accept offer by settling a deposit</li> </ul>
Duration and Mode of Study:	<ul style="list-style-type: none"> <li>- 1 year, full-time</li> </ul>	<ul style="list-style-type: none"> <li>- 1 year, full-time</li> <li>- 2 years, part-time</li> </ul>
Curriculum:	<ul style="list-style-type: none"> <li>- Minimum 30 credits</li> <li>- Selected BSc RMBI students will take up to 14 credits of MSc FinTech courses in Year 4</li> <li>- They will enter MSc FinTech with credit transfer upon completion of BSc RMBI and</li> <li>- complete the remaining credits</li> </ul>	<ul style="list-style-type: none"> <li>- Minimum 30 credits</li> </ul>
Credit Transfer:	<ul style="list-style-type: none"> <li>- Maximum 14 credits</li> <li>- (surplus MSc FinTech credits taken during BSc RMBI)</li> </ul>	<ul style="list-style-type: none"> <li>- Maximum 6 credits</li> </ul>

### Proposed Pathway for BSc RMBI Students (Total: 136-138 Credits)

#### Proposed Study Pattern for \*BSc RMBI (PBA) + MSc FinTech

Year 1		Year 2		Year 3		Year 4	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
LANG 1002 English for University Studies I 3	LANG 1003 English for University Studies II 3	LABU 2051 Business Case Analyses I 2	LABU 2052 Business Case Analyses II 2	MATH 2011 Introduction to Multivariable Calculus 3	RMBI 4310 Advanced Data Mining for Risk Management and Business Intelligence 3	RMBI 4980 Capstone Project I 4	RMBI 4990 Capstone Project II 4
MATH 1012/1013/1020/1023 Calculus 3-4	MATH 1014/ 1024 3  Calculus	MATH 2111/MATH 2121 3-4  Matrix Algebra and Applications/ Linear Algebra	RMBI 3110 3  Introduction to Risk Management and Business Intelligence	COMP4331/ ISOM3360 3  Data Mining/ Data Mining for Business Analytics	ISOM3710 4  Management Science	COMP4651/ ISOM3370 3  Cloud Computing and Big Data Systems/ Big Data Technologies	RMBI4210 3  Quantitative Methods for Risk Management
COMP 1021/ 1022P/ 1022Q 3  Introduction to Computing	ISOM 2010 3  Introduction to Information Systems	MATH2411 4  Applied Statistics	FINA 2303 3  Financial Management	ISOM 3540 3  Introduction to Probability Models	RM/BI Area 3	RM/BI Area 3	Common Core 3
ACCT 2010 3  Principles of Accounting	MGMT 2010 2  Business Ethics and the Individual	ISOM 2700 3  Operations Management	ECON 2123/ ECON3123 3  Macroeconomics	Common Core 3	Common Core 3	FinTech core 2	FinTech core 2
ECON 2103/ECON 2113 3  Microeconomics	Common Core 3	MGMT 2130 2  Business Ethics and Social Responsibility	RM/BI Area 3	Common Core 3	Common Core 3	FinTech core 2	FinTech core 2
	Common Core 3	Common Core 3	# Common Core 3	# Common Core 3		FinTech core 2	FinTech core 2
						FinTech core 2	
RMBI 2001 0	RMBI 2001 0	RMBI 2001 0	RMBI 2001 0	RMBI 2001 0	RMBI 2001 0	RMBI 2001 0	RMBI 2001 0
<b>Total credit</b>	<b>15-16</b>	<b>17</b>	<b>17</b>	<b>18</b>	<b>16</b>	<b>18</b>	<b>16</b>

14 Credits  
(MScFinTech)  
**Total: 134-  
136 Credits**

#### Remarks:

\*not allowed to opt for FinTech Option in RMBI program

# suggest taking these courses in Year 4 of the original RMBI PBA pathway

Yellow texts: FinTech core courses. Selected students are only allowed to take these courses in UG Year 4 and should not take more than 14 credits in the two semesters

## Original BSc RMBI Curriculum

Year 1				Year 2				Year 3				Year 4			
Fall	Cr	Spring	Cr	Fall	Cr	Spring	Cr	Fall	Cr	Spring	Cr	Fall	Cr	Spring	Cr
LANG 1002 English for University Studies I	3	LANG 1003 English for University Studies II	3	LABU 2051 Business Case Analyses I	2	LABU 2052 Business Case Analyses II	2	MATH 2011 Introduction to Multivariable Calculus	3	RMBI 4310 Advanced Data Mining for Risk Management and Business Intelligence	3	RMBI 4980 Capstone Project I	4	RMBI 4990 Capstone Project II	4
MATH 1012/1013/1020/1023 Calculus	3-4	MATH 1014/ 1024 Calculus	3	MATH 2111/ MATH 2121 Matrix Algebra and Applications/ Linear Algebra	3-4	RMBI 3110 Introduction to Risk Management and Business Intelligence	3	COMP4331/ ISOM3360 Data Mining/ Data Mining for Business Analytics	3	ISOM3710 Management Science	4	COMP4651/ ISOM3370 Cloud Computing and Big Data Systems/ Big Data Technologies	3	RMBI4210 Quantitative Methods for Risk Management	3
COMP 1021/ 1022P/ 1022Q Introduction to Computing	3	ISOM 2010 Introduction to Information Systems	3	MATH2411 Applied Statistics	4	FINA 2303 Financial Management	3	ISOM 3540 Introduction to Probability Models	3	RM/BI Area	3	RM/BI Area	3	Common Core	3
ACCT 2010 Principles of Accounting	3	MGMT 2010 Business Ethics and the Individual	2	ISOM 2700 Operations Management	3	ECON 2123/ ECON3123 Macroeconomics	3	Common Core	3	Common Core	3	Common Core	3	Common Core	3
ECON 2103/ ECON 2113 Microeconomics	3	Common Core	3	MGMT 2130 Business Ethics and Social Responsibility	2	RM/BI Area	3	Common Core	3	Common Core	3				
		Common Core	3	Common Core	3										
RMBI 2001	0	RMBI 2001	0	RMBI 2001	0	RMBI 2001	0	RMBI 2001	0	RMBI 2001	0	RMBI 2001	0	RMBI 2001	0
Total Credit	15-16		17		17-18		14		15		16		13		13