

COMMITTEE ON UNDERGRADUATE STUDIES

Paper for: Discussion/Decision

Title: **Major Program Changes to the BSc Program in Integrative Systems and Design**

Purpose: The School of Engineering submits a program change proposal for the BSc program in Integrative Systems and Design. The program proposal is considered a major change and presented to CUS for consideration and endorsement

Submitted by: School of Engineering

Prepared by: CUS Secretariat

BACKGROUND

1. In accordance with the guidelines laid down by the Senate, program change proposals that are identified by the CUS Secretariat as major changes in nature should be presented to the CUS for consideration and to the Senate for approval.

THE PROPOSAL

2. The BSc program in Integrative Systems and Design (ISDN), offered by the Division of Integrative Systems & Design (ISD), was approved by the Senate for introduction in 2018-19. ISD would like to propose a few key changes to enhance the program curriculum.

3. One of the major proposed curricular changes is the addition of three required fundamental technical courses, totaling 10 credits, as faculty members observe the need for second-year students to possess a common set of technical skills which are important for a good design of a system.

4. In connection with the addition of the required fundamental technical courses, the credits for Product Management and Entrepreneurship and Project-Related electives are reduced from 9 to 6 and from 22 to 15, respectively, to keep the number of credits for the curriculum to 120 credits. The reduction of credits for the Product Management and Entrepreneurship would not have much impact on the students' capabilities; and the reduction for Project-Related electives would be compensated by the addition of the required fundamental technical courses.

5. The proposal also comes with minor adjustments in the required fundamental courses and required design fundamental courses and design electives (see Appendix).

6. Despite the above changes, the total required credits for ISDN would be maintained at 120 credits (upon deduction of the allowable 9 reused credits of Common Core).

7. The full proposal presenting the details of the changes and the revised curricula of ISDN are given in the Appendix.

8. The curricula changes are proposed to take effect from Fall 2021-22 and be applicable to the student cohort of 2020-21 and thereafter. The new curriculum was presented to the 20 Year-1 students from 2020-21 cohort. Written consent about agreeing to the proposed changes was obtained from 19 students, except for the student who is on study leave from 7 September to 31 August 2022. The summary of written consent collected and a sample of the written consent are provided at Attachment to the Appendix.

ACTION SOUGHT

9. CUS is invited to consider and recommend, as appropriate, to the Senate for approval the proposed major program changes to ISDN as presented in the Appendix for implementation in Fall 2021-22.

a)	The program is a :	Major <input checked="" type="radio"/>	Minor <input type="radio"/>	Other <input type="radio"/>
b)	Title:	<u>Integrative Systems and Design</u>		
c)	School/IPO recommending the change(s):	<u>School of Engineering</u>		
d)	Offering Department(s):	<u>Division of Integrative Systems & Design</u>		
e)	Effective term for the change(s) proposed:	<u>Fall 2021-22</u>		
f)	Changes proposed applicable to student cohorts of:	<u>Intake of Fall 2020 and onward</u>		

Proposal Submission and Recommendation

<i>Offering Department/Program Unit</i>	<i>Position</i>	<i>Name</i>	<i>Date</i>
<u>Division of Integrative Systems & Design</u>	<u>Head of Dept</u>	<u>Prof Chi Ying TSUI</u>	<u>30-Nov-20</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

<i>Recommending School/IPO</i>	<i>Position</i>	<i>Name</i>	<i>Date</i>
School of Engineering	Associate Dean	Prof Philip K.T. MOK	30-Dec-20

<i>School/Dept/Program Unit</i>	<i>Position</i>	<i>Name</i>	<i>Date</i>
<u>Dept of Computer Science and Engineering</u>	<u>UG Coordinator</u>	<u>Prof Qiong LUO</u>	<u>4-Dec-20</u>
<u>Center for Language Education</u>	<u>Director</u>	<u>Prof Melinda WHONG</u>	<u>4-Dec-20</u>
<u>Dept of Mathematics</u>	<u>UG Coordinator</u>	<u>Dr Tsz-Kin LAM</u>	<u>3-Dec-20</u>
<u>Dept of Physics</u>	<u>UG Coordinator</u>	<u>Prof Bradley A FOREMAN</u>	<u>16-Dec-20</u>
<u>Student Innovation for Global Health Technology</u>	<u>Director</u>	<u>Prof Ying CHAU</u>	<u>8-Dec-20</u>
<u>Dept of Industrial Engineering & Decision Analytics</u>	<u>UG Coordinator</u>	<u>Prof Jiheng ZHANG</u>	<u>3-Dec-20</u>
<u>Entrepreneurship (SSCI)</u>	<u>Associate Dean</u>	<u>Prof Pakwo LEUNG</u>	<u>3-Dec-20</u>
<u>Entrepreneurship (SBM)</u>	<u>Associate Dean</u>	<u>Prof Allen HUANG</u>	<u>7-Dec-20</u>
<u>Dept of Finance</u>	<u>UG Coordinator</u>	<u>Prof Ekkachai SAENYASIRI</u>	<u>3-Dec-20</u>
<u>Dept of Information Systems, Business Statistics & Operations Management - IS</u>	<u>UG Coordinator</u>	<u>Prof Garvin Percy DIAS</u>	<u>3-Dec-20</u>
<u>Dept of Information Systems, Business Statistics & Operations Management - OM</u>	<u>Head of Dept</u>	<u>Prof Shaohui ZHENG</u>	<u>3-Dec-20</u>
<u>Dept of Marketing</u>	<u>UG Coordinator</u>	<u>Prof Ralf VAN DER LANS</u>	<u>16-Dec-20</u>

Section 3: Recommended Change

The following changes are recommended:

☐ Change to the program title

New program title: _____

☐ Change in enrollment requirements

Please specify the change:

☐ Addition/deletion* of an Option, track or concentration of a major (*delete as appropriate)

Name of Option/track/concentration:

☒ Changes to required course(s)

ISDN 2601- Internet of Things: From Component Skills to System Integration (3 credits)	<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Remove
ISDN 2602 - Mechatronic Systems Design with Embedded Computing (3 credits)	<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Remove
ISDN 3601 - Mechanics and Materials (4 credits)	<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Remove
ISDN2700 (Previous Course Code: ISDN3200) - Graphic Design (2 credits)	<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Remove
PHYS 1001 - Physics and the Modern Society	<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Remove

☒ Changes to elective requirements

ISDN 4330 - Ergonomics in Design (2 credits)	<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Remove
ISDN3200 - Graphic Design (2 credits)	<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Remove
	<input type="checkbox"/> Add	<input type="checkbox"/> Remove
	<input type="checkbox"/> Add	<input type="checkbox"/> Remove
	<input type="checkbox"/> Add	<input type="checkbox"/> Remove
	<input type="checkbox"/> Add	<input type="checkbox"/> Remove

☒ Credit changes

Course Code	Credit increase (+) or decrease (-)	Final Credit
Product Management and Entrepreneurship electives	-3	6
Project-related electives	-7	15
Design Electives	-2	3

☒ Other changes

Course Code	Changes
ISDN 2300	Change Full title from “Digital Design” to “Introduction to 3D design” and Catalog description (with effective from Fall 21-22 stated in the course change proposal)
ISDN 3200	Change to ISDN 2700

Section 4: Documentation Required

Please indicate if documentation is attached

- | | |
|--|-------------------------------------|
| a) Reasons for proposing the changes | <input checked="" type="checkbox"/> |
| b) Feedback from stakeholders, including student feedback | <input checked="" type="checkbox"/> |
| c) Revised curriculum | <input checked="" type="checkbox"/> |
| d) Revised sample student pathways | <input checked="" type="checkbox"/> |
| e) Impact on educational objectives and intended learning outcomes | <input type="checkbox"/> |
| f) Transitional arrangements | <input type="checkbox"/> |

Reasons for proposing the changes

1. Addition of three required fundamental technical courses (ISDN 2601, 2602 and 3601)

The addition of these three fundamental technical courses is a result of our annual retreat on UG curriculum held on June 19, 2020. Faculty members discovered that our second-year students need a common set of technical skills, such as IoT, basic knowledge of mechatronic systems, materials, and materials properties as well as the responses of materials when they are subjected to loads. These skills are very important for a good design of a system.

2. Reduction of credits for Product Management and Entrepreneurship electives and Project-Related electives.

The credits of Product Management and Entrepreneurship electives and Project-Related electives are reduced from 9 to 6 and from 22 to 15, respectively because we add 10 credits of required fundamental technical courses and we want to keep the number of credits for the curriculum to 120 credits. The reduction of 3 credits for the product management and entrepreneurship electives was discussed by the UG Curriculum Committee which supports this decision because product management and entrepreneurship is a strong component in the yearlong project course, especially the 4th year project course. Hence, the reduction of 3 credits would not have much impact on the students' capabilities in this area. The reduction of 7 credits for the project-related electives would be more than compensated by an increase of 10 credits in fundamental technical skills. Students will be equipped with the necessary technical skills to handle the year-long projects.

3. Changing ISDN 3200 to ISDN 2700. Addition of ISDN 2700 as a required design fundamental course and Reduction of credits in Design Electives

The change of ISDN 3200 to ISDN 2700 is proposed because this course will be offered to 2nd year students instead of 3rd year students.

Graphic design, which involves effective visualization of communication concepts, is one of the important components in visual communication. ISD students who possess graphic communication skill will show their new product ideas and new products much more effectively.

As ISDN 2700 is proposed to be changed from an elective to a required course (2 credits) and to keep the existing number of credits for the curriculum to be 120 credits, the credits for design electives will be reduced from 5 to 3 credits.

4. Addition of ISDN 4330 as a design elective

The addition of ISDN 4330 will provide students more choices in the design elective.

5. Removal of PHYS 1001 as one of the choices for the required fundamental courses

The removal of PHYS 1001 as one of the choices for the fundamental courses because ISDN 3601 requires PHYS 1111 or PHYS 1112 or PHYS1312 as a pre-requisite. This decision should make it clear to students that they should not take PHYS 1001 if they are qualified to take PHYS 1111 or PHYS 1112 or PHYS1312.

Feedback from stakeholders

The proposed new curriculum was presented to the 1st year students on Dec. 9, 2020. We have not received any objection from the students to the new curriculum. (Attachment)

BSc ISD Program curriculum (Total 120 credits)

(1) University Common Core: 36 credits

Common Core Areas	Credits	
	Required	Electives
Humanities (H)	6	6
Social Analysis (SA)	6	
Science and Technology (S&T)	6	
Quantitative Reasoning (QR)	3	
English Communication	6	Nil
Chinese Communication	3	Nil
Healthy Lifestyle	0	Nil
Total credits	36	

(2) Additional English Courses 6 credits

Course No.	Course Title	Credit(s)
LANG 2030	Technical Communication I	3
LANG 4032	Technical Communication II for IEDA and ISDN	3
Total credits		6

(3) Required Fundamental Courses 12 credits

Course No.	Course Title	Credit	Credits after common core course doubling counting
ENGG 1010	Academic Orientation	0	0
*MATH 1013	Calculus IB	3**	0
*#MATH 1014	Calculus II	3	3
PHYS 1001 /1111/ 1112/1312	Physics and the Modern Society /General Physics I/General Physics I with Calculus/ Honors General Physics I	3**	0
COMP 1021/1022P	Introduction to Computer Science/Introduction to Computing with Java	3**	0
Total credits		12	3

** These are common core course credits

*Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]

MATH 1014 can be replaced by another COMP course upon approval of the advisor.

(4) Required Design Fundamental Courses: 18 credits

Course No.	Course Title	Credit(s)
ISDN 1002	Redefining problems for the real needs	3
ISDN 1004	Sketching	1
ISDN 1006	Human-centered Innovation	3
ISDN 2200	Systems Thinking and Design	3
ISDN 2300	Introduction to 3D Design	3
ISDN 2400	Physical Prototyping	3
ISDN 2700 <i>[Previous Course Code: ISDN3200]</i>	Graphic Design	2
Total credits		18

(5) Required Technical Fundamental Courses: 10 credits

Course No.	Course Title	Credit(s)
ISDN 2601	Internet of Things: From Component Skills to System Integration	3
ISDN 2602	Mechatronic Systems Design with Embedded Computing	3
ISDN 3601	Mechanics and Materials	4

(6) Elective Design Courses – 3 credits from the list below

Course No.	Course Title	Credit(s)
**ENGG 1300	Design Thinking for Health Innovation	3
**ISDN 2000	What is Design and Why Design (a Common Core course)	3
ISDN 2100	Storytelling in Design	1
ISDN 2500	Introduction to Systems Design Engineering	3
ISDN 3100	Design for Sustainability	2
ISDN 3300	Interaction Design	2
ISDN 4300	Materials Selection in Product Design	3
ISDN 4320	Design Thinking	3
ISDN 4330	Ergonomics in Design	2

IEDA 2150	Product Design	3
IEDA 4650	Engineering Psychology	3

(7) Product Management and Entrepreneurship Elective Courses – 6 credits from the list below

Course No.	Course Title	Credit(s)
ENTR 3100	Industrial Landscape: Understanding the Elements to Start a Business	3
FINA 2203	Fundamentals of Business Finance	3
IEDA 4170	Product Design and Lifecycle Management	3
ISDN 3350	Global Product Development	3
ISDN 3360	From Product Innovations to Successful Technology Startups	3
ISDN 4200	Product Management	3
ISOM 1380	Technology and Innovation: Social and Business Perspectives	3
ISOM 2030	Business Protections for Innovations	3
ISOM 2700	Operations Management	3
ISOM 4020	Innovation Management and Technology Entrepreneurship	3
MARK 2120	Marketing Management	3

(8) Project-based Courses – 23 credits

Course No.	Course Title	Credit(s)
ISDN- 2001	Second Year Design Project I	1
ISDN- 2002	Second Year Design Project II	4
ISDN- 3001	Third Year Design Project I	4
ISDN- 3002	Third Year Design Project II	4
ISDN- 4001	Final year Design Project I	5
ISDN- 4002	Final year Design Project II	5
Total credits		23

(9) Project-related Elective Courses – 15 credits

Summary of requirements

Requirement	Credits	Credits after common core course doubling counting
(1) University Common Core	36	36
(2) Additional English Courses	6	6
(3) Required Fundamental Courses	12	3
(4) Required Design Fundamental Courses	18	18
(5) Required Technical Fundamental Courses	10	10
(6) Elective Design Courses	3	3
(7) Product Management and Entrepreneurship Elective Courses	6	6
(8) Project-based Courses	23	23
(9) Project-related Elective Courses	15	15
Total	129	120

(For students admitted in 2020-21 under the 4-year degree)

BSc in Integrative Systems and Design

In addition to the requirements of their major programs, students are required to complete the University requirements for graduation. For details please refer to the respective section on this website.

Some courses can be used to fulfill both Major and University Common Core Requirements. Students may reuse a maximum of 9 credits of these courses to count towards both Requirements.

Students may use no more than 6 credits earned from courses offered in pure online delivery mode to satisfy the graduation requirements of a degree program. This 6-credit limit does not apply to credits obtained through the credit transfer procedures of the University.

For students graduating with an additional major, they must take all the requirements specified for that major, within which they must complete at least 20 single-counted credits. These 20 credits cannot be used to fulfill any other requirements for graduation except for the 120-credit degree requirement.

Major Requirements

Required Course(s)

			Credit(s) attained
ISDN	1002	Redefining Problems for the Real Needs	3
ISDN	1004	Sketching	1
ISDN	1006	Human-centered Innovation	3
ISDN	2001	Second Year Design Project I	1
ISDN	2002	Second Year Design Project II	4
ISDN	2200	Systems Thinking and Design	3
ISDN	2300	Digital Design Introduction to 3D design (effective from Spring 20-21)	3
Add	ISDN	2400 Physical Prototyping	3
	ISDN	3001 Third Year Design Project I	4
	ISDN	3002 Third Year Design Project II	4
	ISDN	4001 Final Year Design Project I	5
	ISDN	4002 Final Year Design Project II	5
	COMP	Note: COMP 1021 <u>OR</u> COMP 1022P	3
	COMP	1021 Introduction to Computer Science	3
	COMP	1022P Introduction to Computing with Java	3
	ENGG	1010 Academic Orientation	0
	LANG	2030 Technical Communication I	3
	LANG	4032 Technical Communication II for IEDA and ISDN	3
	MATH	Note: [MATH 1012 <u>OR</u> MATH 1013 <u>OR</u> MATH 1023 <u>AND</u> (MATH 1014 <u>OR</u> MATH 1024)] <u>OR</u> [MATH 1020] (Subject to approval of the program office, MATH 1014/1024 may be replaced by a COMP course)	4-7
	MATH	1012 Calculus IA	4
	MATH	1013 Calculus IB	3
	ISDN	2601 Internet of Things : From Component Skills to System Integration	3
	ISDN	2602 Mechatronic Systems Design with Embedded Computing	3
	ISDN	3601 Mechanics and Materials	4

MATH	1014	Calculus II	3
MATH	1020	Accelerated Calculus	4
MATH	1023	Honors Calculus I	3
MATH	1024	Honors Calculus II	3
PHYS		Note: PHYS 1001 OR PHYS 1111 <u>OR</u> PHYS 1112 <u>OR</u> PHYS 1312	3
PHYS	1001	Physics and the Modern Society	3
PHYS	1111	General Physics I	3
PHYS	1112	General Physics I with Calculus	3
PHYS	1312	Honors General Physics I	3

Elective(s)

			Minimum credit(s) required	
ISDN/ENGG/ IEDA	Design Electives (Courses from the specified elective list)		5	3 (Reduced by 2 credits)
ISDN	2000	What is Design and Why Design?	3	
ISDN	2100	Storytelling in Design	1	
ISDN	2500	Introduction to Systems Design Engineering	3	
ISDN	3100	Design for Sustainability	2	
ISDN	3200	Graphic Design	2	
ISDN	3300	Interaction Design	2	
ISDN	4300	Materials Selection in Product Design	3	
ISDN	4320	Design Thinking	3	
ENGG	1300	Design Thinking for Health Innovation	3	
IEDA	2150	Product Design	3	
IEDA	4650	Engineering Psychology	3	
ISDN	4330	Ergonomics in Design	2	
ISDN/ENTR/ IEDA/SBM	Product Management and Entrepreneurship Electives (Courses from the specified elective list)		9	6 (Reduced by 3 credits)
ISDN	3350	Global Product Development	3	
ISDN	3360	From Product Innovations to Successful Technology Startups	3	
ISDN	4200	Product Management	3	
ENTR	3100	Industrial Landscape: Understanding the Elements to Start a Business	3	
IEDA	4170	Product Design and Lifecycle Management	3	
FINA	2203	Fundamentals of Business Finance	3	
ISOM	1380	Technology and Innovation: Social and Business Perspectives	3	
ISOM	2030	Business Protections for Innovations	3	
ISOM	2700	Operations Management	3	
ISOM	4020	Innovation Management and Technology Entrepreneurship	3	
MARK	2120	Marketing Management	3	
ISDN	Project-related Electives (Courses from the specified elective list. Students should seek approval of their advisor for the choices of courses.)		22	15 (Reduced by 7 credits)

Normative Study pattern for an ISD student (For 20-21 intake and onwards)

Year 4	Spring	Design ISDN 4002 (5)				ISDN 4200 (3)	Humanities (3)	Social Analysis (3)		14
	Fall	Design ISDN 4001 (5)				IEDA 4170 (3)	Social Analysis (3)	Chinese (3)		14
Year 3	Spring	Design ISDN 3002 (4)	COMP 3211 (3)			Advanced English LANG 4032 (3)	ISDN 2000 (3)	Humanities (3)		16
	Fall	Design ISDN 3001 (4)	COMP2711 (4)		ISDN 3601 (4)	Advanced English LANG 2030 (3)				15
Year 2	Spring	Design ISDN 2002 (4)	COMP 2012 (4)		ISDN 2602 (3)	Sci. & Tech (3)	ISDN 2700 (2)			16
	Fall	Design ISDN 2001 (1)	COMP 2011 (4)		ISDN 2601 (3)	Design ISDN 2200 (3)	Sci. & Tech (3)			14
Year 1	Spring	English II LANG 1003 (3)	Health HLTH 1010 (0)	Quantitative reasoning COMP 1021 (3)	MATH1014 (3)	Design ISDN 1006 (3)	Design ISDN 2400 (3)	Academic Orientation ENGG1010 (0)		15
	Fall	English I LANG 1002 (3)	Sci. & Tech PHYS 1112 (3)	Health HLTH 1010 (0)	Quantitative reasoning Math 1013 (3)	Design ISDN 1002 (3)	Design ISDN 1004 (1)	Design ISDN 2300 (3)	Academic Orientation ENGG1010 (0)	16

Required technical Fundamental Courses

Common core

Required courses

ISDN Design electives

Project-related electives

Product management and entrepreneurship electives

The Hong Kong University of Science and Technology

School of Engineering

An Example on Student's Pathway (as of Fall 2021-22)

| << Declaration of major

School:		School of Engineering		Student's Pathways (i.e. Study Pattern)										Remarks
Department:		Division of Integrative Systems and Design		Pathway 1										
Program:		BSc in Integrative Systems and Design		Background: HKDSE 4 Core + 2 Elec										
				Profile:										
Course Offering Dept (course code prefix)	Course Code	Course Title / Courses List		Credits	Year 1 Fall	Year 1 Spring	Year 2 Fall	Year 2 Spring	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring	Sub-total	

Major Requirements

Major Required Courses and Electives

ISDN	1002	Redefining Problems for the Real Needs	3	3								3	
ISDN	1004	Sketching	1	1								1	
ISDN	1006	Human-centered Innovation	3		3							3	
ISDN	2001	Second Year Design Project I	1			1						1	
ISDN	2002	Second Year Design Project II	4				4					4	
ISDN	2200	Systems Thinking and Design	3			3						3	
ISDN	2300	Digital Design	3	3								3	
ISDN	2400	Physical Prototyping	3		3							3	
ISDN	2601	Internet of Things : From Component Skills to System Integration	3			3						3	
ISDN	2602	Mechatronic Systems Design with Embedded Computing	3				3					3	
ISDN	2700	Graphic Design	2				2					2	
ISDN	3001	Third Year Design Project I	4					4				4	
ISDN	3002	Third Year Design Project II	4						4			4	
ISDN	3601	Mechanics and Materials	4					4				4	
ISDN	4001	Final Year Design Project I	5							5		5	
ISDN	4002	Final Year Design Project II	5								5	5	
COMP	1021	Note: COMP 1021 OR COMP 1022P	3		3*							3	* Double count as common core course
COMP	1022P	Introduction to Computer Science	3										
COMP	1022P	Introduction to Computing with Java	3										
ENGG	1010	Academic Orientation	0	0	0							0	
LANG	2030	Technical Communication I	3					3				3	
LANG	4032	Technical Communication II for IEDA and ISDN	3						3			3	
MATH		Note: [MATH 1012 OR MATH 1013 OR MATH 1023 AND (MATH 1014 OR MATH 1024)] OR [MATH 1020] (Subject to approval of the program office, MATH 1014/1024 may be replaced by a COMP course)	4-7										1) *MATH1013 - Double count as common core course 2) For students who chose the technical stream of Computer Science, MATH1014 is not a compulsory course.
MATH	1012	Calculus IA	4										
MATH	1013	Calculus IB	3	3*	3							3	
MATH	1014	Calculus II	3										
MATH	1020	Accelerated Calculus	4										
MATH	1023	Honors Calculus I	3										
MATH	1024	Honors Calculus II	3										
PHYS		Note: PHYS 1001 OR PHYS 1111 OR PHYS 1112 OR PHYS 1312	3										* Double count as common core course
PHYS	1004	Physics and the Modern Society	3										
PHYS	1111	General Physics I	3	3*								3	
PHYS	1112	General Physics I with Calculus	3										
PHYS	1312	Honors General Physics I	3										
ISDN		Project-related Electives (Courses from the specified elective list. Students should seek approval of their advisor for the choices of courses.)	15			4	4	4	3			15	
ISDN/ENGG/IEDA		Design Electives (Courses from the specified elective list)	3						3			3	
ISDN/ENTR/IEDA/SBM		Product Management and Entrepreneurship Electives (Courses from the specified elective list)	6							3	3	6	
Required credits for Major Required Courses and Electives			91-94									90	

University CORE

CORE	C3 - C12	U CORE - Others	30	6	3	3	3		3	6	6	30	
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
Sub-total for University CORE			36									36	

Term load (excl. free credits)

16	15	14	16	15	16	14	14
120 #							

Notes:

* Courses offered in winter term

To graduate, students should complete at least 120 credits in approved courses. They may need to take courses additional to the required and elective courses as specified above to meet this minimum credit requirement.

>> The content of this example is not necessarily equivalent to a complete list of graduation requirements of the program. Students should refer to the Program Catalog/UG Curriculum Handbook for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.

| << Declaration of major

as of 16 Dec 2020

Progress of Collecting Written Consent from ISD Students (20-21 cohort)						
Student ID	Student Name	Cohort Term	Current Academic Plan	Current Program Status	Provided Written Consent?	Remarks
[REDACTED]	[REDACTED]	2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
[REDACTED]	[REDACTED]	2020-21 Fall	BSc(ISD): 4Y	Leave	N	- Due to the commitment of National Service for Singapore Armed Forces, the student is taking study leave from 7 Sept 2020 to 31 Aug 2022. - ISD sent email to inform him about the proposed program changes, but his written consent is outstanding.
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
		2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	
[REDACTED]	[REDACTED]	2020-21 Fall	BSc(ISD): 4Y	Active in Program	Y	- The student is taking PHYS1001 in Fall 20-21 - She provided her written consent and was well informed about the proposed program changes.

Agreement on the New Curriculum of the BSc in ISDN program

I agree with the changes made by the Division of Integrative Systems and Design (ISD) on the BSc ISDN program and I am well informed with the changes listed in the attached proposal and its impact to the students of 2020 21 cohort.

Student Name:

[REDACTED]

Signature:

[REDACTED]

Date: 10/12/2020