The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< *Declaration of major*

School:	School of Engineering		Student's Pathways (i.e. Study Pattern)		
Department:	Department of Mechanical and Aerospace Engineering		Pathway 1		
Program:	BEng in Aerospace Engineering + Extended Major in Digital Media and Creative Arts	Background: ☐ ☐ Profile: Normative. Students to gradate in BEng (AE) with Research Option			

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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP☐ ☐	☐	Note: COMP 1021 OR COMP 1022P OR COMP 2011 OR COMP 2012H☐	3-5										
COMP☐	1021☐	Introduction to Computer Science☐	3	3								3	
COMP☐	1022P☐	Introduction to Computing with Java☐	3										
COMP☐	2011☐	Programming with C++☐	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
LANG	2030	Technical Communication I	3			3						3	
MATH☐	☐	Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND☐ (MATH 1014 OR MATH 1024)] OR [MATH 1020]☐	4-7										
MATH☐	1012☐	Calculus IA☐	4										
MATH☐	1013☐	Calculus IB☐	3	3	3							6	
MATH☐	1014☐	Calculus II☐	3										
MATH☐	1020☐	Accelerated Calculus☐	4										
MATH☐	1023☐	Honors Calculus I☐	3										
MATH	1024	Honors Calculus II	3										
MATH	2011	Introduction to Multivariable Calculus	3			3						3	
MATH☐	☐	Note: MATH 2111 OR MATH 2350 OR MATH 2351☐	3										
MATH☐	2111☐	Matrix Algebra and Applications☐	3				3					3	
MATH☐	2350☐	Applied Linear Algebra and Differential Equations☐	3										
MATH	2351	Introduction to Differential Equations	3										
PHYS☐	☐	Note: PHYS 1112 OR PHYS 1312☐	3										
PHYS☐	1112☐	General Physics I with Calculus☐	3		3							3	
PHYS	1312	Honors General Physics I	3										
CHEM/LIFS/PHYS		Science 1000-level course (1 course from the specified course list)	3-4		3							3	
		Required credits for Engineering Fundamental Courses	22-28	6	9	6	3	0	0	0	0	24	
Major Required Courses and Electives													
MECH	1907	Introduction to Aerospace Engineering	3	3								3	
MECH	1990	Industrial Training	0			0*	[0^]					0	
MECH	2020	Statics and Dynamics	3			3						3	
MECH	2040	Solid Mechanics I	3				3					3	
MECH	2210	Fluid Mechanics	3				3					3	
MECH	2310	Thermodynamics	3			3						3	
MECH	2410	Engineering Materials I	3				3					3	
MECH	3400	Introduction to Composite Materials	3					3				3	
MECH	3610	Control Principles	3					3				3	
MECH	3620	Aircraft Design	3						3			3	
MECH	3640	Aerodynamics	3					3				3	
MECH	3650	Aircraft Structural Analysis	3					3				3	
MECH	3660	Gas Turbines and Jet Propulsion	3						3			3	
MECH	3670	Aircraft Performance and Stability	3					3				3	
MECH	3680	Avionics Systems	3						3			3	
MECH	3690	Aerospace Engineering Laboratory	3						3			3	
MECH	4980	Final Year Aerospace Design Project	6							3	3	6	
ELEC	2420	Basic Electronics	3			3						3	
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
LANG	4034	Technical Communication II for Mechanical and Aerospace Engineering	3						3			3	
MECH		MECH Electives in Aerospace (2 courses from the specified elective list)	6							3	3	6	
		Required credits for Major Required Courses and Electives	63	3	0	9	9	15	15	6	6	63	
Option Requirements													
Research Option													
MECH	4990	Aerospace Research Project	6							3	3	6	
		Required credits for Research Option	6	0	0	0	0	0	0	3	3	6	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4			4						4	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
		Required credits for DMCA Recommended Background Courses	10-12	0	0	4	0	0	0	0	0	4	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3				3					3	
EMIA	2200	Introduction to Digital Media	3				3					3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0								0	0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/ SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits DMCA Electives	12-15					3	3	3	3	12	
		Required credits for DMCA Required Courses and Electives	21	0	0	0	3	6	3	3	3	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	5		3			6	9	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1; Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
		Sub-total for University CORE	30	4	8	0	3	0	0	6	9	30	

	Year 1 Fall	Year 1 Spring	Year 2 Fall	Year 2 Spring	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring
Term load (excl. free credits)								
	13	17	19	18	21	18	18	21
**142 (w/o option)	148 (w/ option)#**								

<< *Declaration of major*

Notes:

[ ] denotes the course is also offered in other terms as indicated and students may take the course in one of these terms subject to advice by the program office.

* Courses offered in winter term

^ Courses offered in summer 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 for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.

The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< Declaration of major

School:		School of Engineering					Student's Pathways (i.e. Study Pattern)							
Department:		Department of Civil and Environmental Engineering							Pathway 1					
Program:		BEng in Civil and Environmental Engineering + Extended Major in Digital Media and Creative Arts			Background: HKDSE 4 Core + 2 Elec (incl. 1/2x PHYS, 1/2x CHEM)									
					Profile: Normative. Students to graduate in BEng CIEV with Research Option									

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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP		Note: COMP 1021 OR COMP 1022P OR COMP 2011 OR COMP 2012H	3-5										
COMP	1021	Introduction to Computer Science	3	3								3	
COMP	1022P	Introduction to Computing with Java	3										
COMP	2011	Programming with C++	5										
COMP	2012H	Honors Object-Oriented Programming and Data Structures											
CHEM	1020	General Chemistry I	3	3								3	
LANG	2030	Technical Communication I	3				3					3	
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7										
MATH	1012	Calculus IA	4										
MATH	1013	Calculus IB	3	3	3							6	
MATH	1014	Calculus II	3										
MATH	1020	Accelerated Calculus	4										
MATH	1023	Honors Calculus I	3										
MATH	1024	Honors Calculus II	3										
MATH	2011	Introduction to Multivariable Calculus	3			3						3	
MATH	2350	Applied Linear Algebra and Differential Equations	3			3						3	
PHYS		Note: PHYS 1112 OR PHYS 1312	3										
PHYS	1112	General Physics I with Calculus	3	3								3	
PHYS	1312	Honors General Physics I	3										
		Required credits for Engineering Fundamental Courses	22-27	12	3	6	3	0	0	0	0	24	
Major Required Courses and Electives													
CIVL	1010	Academic and Professional Development I	0			0	0					0	
CIVL	1100	Discovering Civil and Environmental Engineering	3		3							3	
CIVL	2010	Academic and Professional Development II	0					0	0			0	
CIVL	2020	Industrial and BIM Training	0				0*					0	Student should attend the training modules in Year 2 Winter and Spring terms.
CIVL	2110	Statics	3			3						3	
CIVL	2120	Mechanics of Materials	3				3					3	
CIVL	2160	Modeling Systems with Uncertainties	3			3						3	
CIVL	2170	Infrastructure Systems Engineering and Management	3				3					3	
CIVL	2410	Environmental Assessment and Management	3				3					3	
CIVL	2510	Fluid Mechanics	3				3					3	
CIVL	2810	Construction Materials	3						3			3	
CIVL	3010	Academic and Professional Development III	0							0	0	0	
CIVL	3020	Internship Training	0						0^			0	
CIVL		Note: CIVL 3210 OR CIVL 3610	3										
CIVL	3210	Introduction to Construction Management	3						3			3	
CIVL	3610	Traffic and Transportation Engineering	3										
CIVL	3310	Structural Analysis	3					3				3	
CIVL	3320	Reinforced Concrete Design	3						3			3	
CIVL	3420	Water and Wastewater Engineering	3						3			3	
CIVL	3510	Hydrosystems Engineering	3					3				3	
CIVL	3730	Fundamentals of Geotechnics	3					3				3	
CIVL	3740	Geotechnical Analysis and Design	3						3			3	
CIVL		Note: CIVL 4910 OR CIVL 4920 (Students taking the Research Option must take CIVL 4920)	6										
CIVL	4910	Civil and Environmental Engineering Final Year Project	6							2	4	6	
CIVL	4920	Civil and Environmental Engineering Final Year Thesis	6										
CIVL	4950	Civil Engineering Capstone Design Project	3							3		3	
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
LANG	4033	Technical Communication II for Civil and Environmental Engineering	3							3		3	
CIVL/SENG		CIVL (Environmental) Electives [3 courses from the specified elective list. At least 2 courses (6 credits) should be selected from the "Restricted Electives", of which 1 course must be taken from CIVL 4450, CIVL 5450 or CIVL 5460.]	9							3	6	9	
		Required credits for Major Required Courses and Electives	66	0	3	6	12	12	12	11	10	66	
Option Requirements													
Research Option													
CIVL/UROP		Note: CIVL 4900 OR UROP 1100	1-4										
CIVL	4900	Directed Studies	1-4							1		1	
UROP	1100	Undergraduate Research Opportunities Series 1	1										
		Advanced Electives (Courses at 4000- or PG level. Students should seek approval of their advisor for the choices of courses.)	3								3	3	
		Required credits for Research Option	4-7	0	0	0	0	0	0	1	3	4	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4			4						4	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
		Required credits for DMCA Recommended Background Courses	10-12	0	0	4	0	0	0	0	0	4	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3				3					3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0							0	0	0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/ SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits	12-15							6	3	3	12	
		DMCA Electives											
		Required credits for DMCA Required Courses and Electives	21	0	0	0	3	3	6	3	3	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	8	3	3	3	0	3	3	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1; Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
		Sub-total for University CORE	30	4	11	3	3	3	0	3	3	30	

	Term load (excl. free credits)							
16	17	19	21	18	18	18	19

145 (w/o option) | 149(w/ option)#

<< Declaration of major

Notes:

* Courses offered in winter term

^ Courses offered in summer 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

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2022-23 CIEV (4Y) (2022-23 intake)

The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< Declaration of major

School:		School of Engineering		Student's Pathways (i.e. Study Pattern)									
Department:		Department of Civil and Environmental Engineering		Pathway 1									
Program:		BEng in Civil Engineering + Extended Major in Digital Media and Creative Arts		Background: HKDSE 4 Core + 2 Elec (incl. 1/2x PHYS, 1/2x CHEM) Profile: Normative. Students to graduate in BEng CIVL with Research Option									

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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP		Note: COMP 1021 OR COMP 1022P OR COMP 2011 OR COMP 2012H	3-5										
COMP	1021	Introduction to Computer Science	3	3								3	
COMP	1022P	Introduction to Computing with Java	3										
COMP	2011	Programming with C++	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
CHEM	1020	General Chemistry I	3	3								3	
LANG	2030	Technical Communication I	3				3					3	
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7										
MATH	1012	Calculus IA	4	3	3							6	
MATH	1013	Calculus IB	3										
MATH	1014	Calculus II	3										
MATH	1020	Accelerated Calculus	4										
MATH	1023	Honors Calculus I	3										
MATH	1024	Honors Calculus II	3										
MATH	2011	Introduction to Multivariable Calculus	3			3						3	
MATH	2350	Applied Linear Algebra and Differential Equations	3			3						3	
PHYS		Note: PHYS 1112 OR PHYS 1312	3										
PHYS	1112	General Physics I with Calculus	3	3								3	
PHYS	1312	Honors General Physics I	3										
Required credits for Engineering Fundamental Courses			22-27	12	3	6	3	0	0	0	0	24	
Major Required Courses and Electives													
CIVL	1010	Academic and Professional Development I	0			0	0					0	
CIVL	1100	Discovering Civil and Environmental Engineering	3		3							3	
CIVL	2010	Academic and Professional Development II	0					0	0			0	
CIVL	2020	Industrial and BIM Training	0			0*						0	Student should attend the training modules in Year 2 Winter and Spring terms.
CIVL	2110	Statics	3			3						3	
CIVL	2120	Mechanics of Materials	3				3					3	
CIVL	2160	Modeling Systems with Uncertainties	3				3					3	
CIVL	2170	Infrastructure Systems Engineering and Management	3				3					3	
CIVL	2410	Environmental Assessment and Management	3				3					3	
CIVL	2510	Fluid Mechanics	3				3					3	
CIVL	2810	Construction Materials	3					3				3	
CIVL	3010	Academic and Professional Development III	0							0	0	0	
CIVL	3020	Internship Training	0						0^			0	
CIVL	3210	Introduction to Construction Management	3						3			3	
CIVL	3310	Structural Analysis	3					3				3	
CIVL	3320	Reinforced Concrete Design	3						3			3	
CIVL	3510	Hydrosystems Engineering	3					3				3	
CIVL	3610	Traffic and Transportation Engineering	3						3			3	
CIVL	3730	Fundamentals of Geotechnics	3					3				3	
CIVL	3740	Geotechnical Analysis and Design	3						3			3	
CIVL		Note: CIVL 4910 OR CIVL 4920 (Students taking the Research Option must take CIVL 4920)	6							2	4	6	
CIVL	4910	Civil and Environmental Engineering Final Year Project	6										
CIVL	4920	Civil and Environmental Engineering Final Year Thesis	6										
CIVL	4950	Civil Engineering Capstone Design Project	3							3		3	
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
LANG	4033	Technical Communication II for Civil and Environmental Engineering	3							3		3	
CIVL/SENG		CIVL Electives (3 courses from the specified elective list)	9							3	6	9	
Required credits for Major Required Courses and Electives			66	0	3	6	12	12	12	11	10	66	
Option Requirements													
Research Option													
CIVL/UROP		Note: CIVL 4900 OR UROP 1100	1-4							1		1	
CIVL	4900	Directed Studies	1-4										
UROP	1100	Undergraduate Research Opportunities Series 1	1										
		Advanced Electives (Courses at 4000- or PG level. Students should seek approval of their advisor for the choices of courses.)	3								3	3	
Required credits for Research Option			4-7	0	0	0	0	0	0	1	3	4	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4			4						4	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
Required credits for DMCA Recommended Background Courses			10-12	0	0	4	0	0	0	0	0	4	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3				3					3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0							0	0	0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/ SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits DMCA Electives	12-15						6	3	3	12	
Required credits for DMCA Required Courses and Electives			21	0	0	0	3	3	6	3	3	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	8	3	0	6	0	3	3	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1; Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
Sub-total for University CORE			30	4	11	3	0	6	0	3	3	30	
		Term load (excl. free credits)		16	17	19	18	21	18	18	19		
				145 (w/o option) | 149 (w/ option)#									

<< Declaration of major

Notes:

* Courses offered in winter term

^ Courses offered in summer 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.

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The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< *Declaration of major*

School:		School of Engineering		Student's Pathways (i.e. Study Pattern)									
Department:		Department of Computer Science and Engineering		Pathway 1									
Program:		BEng in Computer Science + Extended Major in Digital Media and Creative Arts		Background: ☐ ☐ 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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP☐	☐	Note: COMP 1021 OR COMP 1022P☐	3										
COMP☐	1021☐	Introduction to Computer Science☐	3	3								3	
COMP	1022P	Introduction to Computing with Java	3										
CHEM/LIFS/PHYS☐	☐	Note: CHEM 1008 OR CHEM 1020 OR LIFS 1901 OR☐ PHYS 1101 OR PHYS 1112 OR PHYS 1312☐	3-4										
CHEM☐	1008☐	Introductory Chemistry☐	3										
CHEM☐	1020☐	General Chemistry I☐	3										
LIFS☐	1901☐	General Biology I☐	3		3							3	
PHYS☐	1101☐	Introductory Physics☐	4										
PHYS☐	1112☐	General Physics I with Calculus☐	3										
PHYS	1312	Honors General Physics I	3										
LANG	2030	Technical Communication I	3			3						3	
MATH☐	☐	Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND☐ (MATH 1014 OR MATH 1024)] OR [MATH 1020]☐	4-7										
MATH☐	1012☐	Calculus IA☐	4										
MATH☐	1013☐	Calculus IB☐	3										
MATH☐	1014☐	Calculus II☐	3	3	3							6	
MATH☐	1020☐	Accelerated Calculus☐	4										
MATH☐	1023☐	Honors Calculus I☐	3										
MATH	1024	Honors Calculus II	3										
MATH	2111	Matrix Algebra and Applications	3			3						3	
SENG		Engineering Introduction course (COMP students may also use COMP 1022P to fulfill this requirement.)	3-4									0	
		Required credits for Engineering Fundamental Courses	19-24	6	6	6	0	0	0	0	0	18	
Major Required Courses and Electives													
COMP☐	☐	Note: [COMP 1991 AND (COMP 4981 OR COMP 4981H)]☐ OR [COMP 4910]☐	6										
COMP☐	1991☐	Industrial Experience☐	0										
COMP☐	4910☐	Co-op Program☐	6						3	3	6	
COMP☐	4981☐	Final Year Project☐	6										
COMP	4981H	Final Year Thesis	6										
COMP☐	☐	Note: (COMP 2011 AND COMP 2012) OR COMP 2012H☐	5-8										
COMP☐	2011☐	Programming with C++☐	4										
COMP☐	2012☐	Object-Oriented Programming and Data Structures☐	4			4	4					8	
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
COMP	2611	Computer Organization	4				4					4	
COMP☐	☐	Note: COMP 2711 OR COMP 2711H☐	4										
COMP☐	2711☐	Discrete Mathematical Tools for Computer Science☐	4			4						4	
COMP	2711H	Honors Discrete Mathematical Tools for Computer Science	4										
COMP☐	☐	Note: COMP 3111 OR COMP 3111H☐	4										
COMP☐	3111☐	Software Engineering☐	4					4				4	
COMP	3111H	Honors Software Engineering	4										
COMP	3511	Operating Systems	3					3				3	
COMP☐	☐	Note: COMP 3711 OR COMP 3711H☐	3-4										
COMP☐	3711☐	Design and Analysis of Algorithms☐	3					3				3	
COMP	3711H	Honors Design and Analysis of Algorithms	4										
COMP☐	☐	Note: Students are required to take COMP 4900 for every regular☐ term in which they are in residency at HKUST with major☐ in COMP☐	0										
COMP	4900	Academic and Professional Development	0			0	0	0	0	0	0	0	
ELEC/IEDA/MATH☐	☐	Note: ELEC 2600 OR ELEC 2600H OR IEDA 2520 OR☐ IEDA 2540 OR MATH 2411 OR MATH 2421 OR☐ MATH 2431☐	3-4										
ELEC☐	2600☐	Probability and Random Processes in Engineering☐	4										
ELEC☐	2600H☐	Honors Probability and Random Processes in Engineering☐	4										
IEDA☐	2520☐	Probability for Engineers☐	3				4					4	
IEDA☐	2540☐	Statistics for Engineers☐	3										
MATH☐	2411☐	Applied Statistics☐	4										
MATH☐	2421☐	Probability☐	4										
MATH	2431	Honors Probability	4										
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
LANG	4030	Technical Communication II for CSE, CPEG & DSCT	3							3		3	
COMP		COMP Electives (5 courses from the specified elective list, of which at least 3 courses should be taken from 1 area and at least 2 courses outside that area (including course(s) in the Courses Without Associated Area). Students may use at most one course under Deep Learning Applications (COMP 4471 and COMP 5223) to count towards this elective requirement.)	15						6	6	3	15	
COMP		COMP 2000-level or above Elective (Any course(s) of the subject and level as specified)	3								3	3	
		Required credits for Major Required Courses and Electives	53-58	0	0	8	12	10	6	12	9	57	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4										
COMP	2012	Object-Oriented Programming and Data Structures	4		(4)							0	
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
		Required credits for DMCA Recommended Background Courses	10-12	0	0	0	0	0	0	0	0	0	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3				3					3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Project	0							0	0	0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/ SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits DMCA Electives	12-15						3	3	6	12	
		Required credits for DMCA Required Courses and Electives	21	0	0	0	3	3	3	3	6	18	
University CORE (Revamped)													
CORE	C3 - C12	U CORE - Others	24	1	5		3	3	6	3	3	24	
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
		Sub-total for University CORE	30	4	8	0	3	3	6	3	3	30	
		Term load (excl. free credits)		10	14	14	18	16	15	18	18	126#	

<< *Declaration of major*

Note:

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 for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.

The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< Declaration of major

School:	School of Engineering		Student's Pathways (i.e. Study Pattern)
Department:	Computer Engineering Program Office		Pathway 1
Program:	BEng in Computer Engineering + Extended Major in Digital Media and Creative Arts		Background: HKDSE 4 Core + 2 Elec (incl. 1/2x PHYS) Profile: Normative. Students to graduate in BEng CPEG with Research Option

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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP		Note: COMP 1021 OR COMP 1022P	3										
COMP	1021	Introduction to Computer Science	3	3								3	
COMP	1022P	Introduction to Computing with Java	3										
LANG	2030	Technical Communication I	3				3					3	
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7										
MATH	1012	Calculus IA	4										
MATH	1013	Calculus IB	3	3	3							6	
MATH	1014	Calculus II	3										
MATH	1020	Accelerated Calculus	4										
MATH	1023	Honors Calculus I	3										
MATH	1024	Honors Calculus II	3										
MATH	2011	Introduction to Multivariable Calculus	3					3				3	
MATH	2111	Matrix Algebra and Applications	3			3						3	
PHYS		Note: PHYS 1112 OR PHYS 1312	3										
PHYS	1112	General Physics I with Calculus	3	3								3	
PHYS	1312	Honors General Physics I	3										
PHYS		Note: PHYS 1114 OR PHYS 1314	3										
PHYS	1114	General Physics II	3		3							3	
PHYS	1314	Honors General Physics II	3										
SENG		Engineering Introduction course (If the students take an introduction course included in their major, this course can be counted towards their major requirement.)	3-4		3							3	
		Required credits for Engineering Fundamental Courses	25-29	9	9	3	3	3	0	0	0	27	
Major Required Courses and Electives													
CPEG		Note: [CPEG 1971 AND (CPEG 4901 OR CPEG 4902 OR CPEG 4911 OR CPEG 4912)] OR [CPEG 4910] (Students taking the Research Option must take either CPEG 4902 or CPEG 4912):	6										
CPEG	1971	Industrial Experience	0										
CPEG	4901	Computer Engineering Final Year Project in COMP	6							3	3	6	
CPEG	4902	Computer Engineering Final Year Thesis in COMP	6										
CPEG	4910	Co-op Program	6										
CPEG	4911	Computer Engineering Final Year Project in ELEC	6										
CPEG	4912	Computer Engineering Final Year Thesis in ELEC	6										
CPEG	2930	Academic and Professional Development I	0			0	0					0	
CPEG	3930	Academic and Professional Development II	0					0	0			0	
COMP		Note: (COMP 2011 AND COMP 2012) OR COMP 2012H	5-8										
COMP	2011	Programming with C++	4			4		4				8	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
COMP/ELEC		Note: COMP 2611 OR ELEC 2350	4										
COMP	2611	Computer Organization	4				4					4	
ELEC	2350	Introduction to Computer Organization and Design	4										
COMP/ELEC		Note: COMP 2711 OR COMP 2711H OR ELEC 2600	4										
COMP	2711	Discrete Mathematical Tools for Computer Science	4					4				4	
COMP	2711H	Honors Discrete Mathematical Tools for Computer Science	4										
ELEC	2600	Probability and Random Processes in Engineering	4										
COMP	3511	Operating Systems	3						3			3	
ELEC	1100	Introduction to Electro-Robot Design	4			4						4	
ELEC		Note: ELEC 1200 OR ELEC 2100 OR ELEC 2400 (2 out of 3 courses)	8										
ELEC	1200	A System View of Communications: from Signals to Packets	4				8					8	
ELEC	2100	Signals and Systems	4										
ELEC	2400	Electronic Circuits	4										
ELEC	3300	Introduction to Embedded Systems	4						4			4	
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
LANG		Note: LANG 4030 OR LANG 4031	3										
LANG	4030	Technical Communication II for CSE, CPEG & DSCT	3							3		3	
LANG	4031	Technical Communication II for ECE & CPEG	3										
COMP/ELEC		CPEG Restricted Elective (1 course from the specified elective list. The course taken as Restricted Elective may not be counted towards the requirement under "Area Courses".)	3							3		3	
COMP/ELEC/ENGG		Area Courses (At least 2 courses should be taken from one single area and at least 2 courses outside that area. Courses taken as Major Required Courses may not be counted towards the elective requirement.)	15						3	6	6	15	The 15 credits are divided as 5 courses with each course carries 3 credits.
		Required credits for Major Required Courses and Electives	59-62	0	0	8	12	8	10	15	9	62	
Option Requirements													
Research Option													
COMP/ELEC		CPEG Electives (1 PG-level course as approved by advisor)	3							3		3	
COMP/ELEC/UROP		Research Electives [Students should take either (ELEC 5900 AND UROP 1100) or a 3-credit COMP 5000-level course to fulfill this requirement.]	2-3			[1]	[1]	1	1	[3]		2	
		Required credits for Research Option	5-6	0	0	0	0	1	1	3	0	5	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4			(4)						0	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
		Required credits for DMCA Recommended Background Courses	10-12	0	0	0	0	0	0	0	0	0	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3						3			3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0								0	0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/ SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits DMCA Electives	12-15						3	3	6	12	Students can choose suitable courses in Year 3 Spring and Year 4 Spring to double count for CPEG and DMCA requirements
		Required credits for DMCA Required Courses and Electives	21	0	0	0	0	3	6	3	6	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	5	6	3	3	3		3	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1; Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
		Sub-total for University CORE	30	4	8	6	3	3	3	0	3	30	

Term load (excl. free credits)

13	17	17	18	18	20	21	18

140 (w/o option) | 145 (w/ option)#

<< Declaration of major

Notes:

[ ] denotes the course is also offered in other terms as indicated and students may take the course in one of these terms subject to advice by the program office.

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 requireme

>> 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 for updated graduation requirements. For up-to-date offering and scheduling, students should check it out from respective School and Department.

The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< *Declaration of major*

School:		School of Engineering		Student's Pathways (i.e. Study Pattern)									
Department:		Department of Industrial Engineering and Decision Analytics		Pathway 1									
Program:		BEng in Decision Analytics + Extended Major in Digital Media and Creative Arts		Background: HKDSE 4 Core + 2 Elec (incl. 1/2x PHYS)☐ ☐ Profile: Normative									

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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP☐ ☐	☐	Note: COMP 1021 OR COMP 1022P OR COMP 2011 OR☐ COMP 2012H☐	3-5										
COMP☐	1021☐	Introduction to Computer Science☐	3	3								3	
COMP☐	1022P☐	Introduction to Computing with Java☐	3										
COMP☐	2011☐	Programming with C++☐	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
CHEM/PHYS☐	☐	Note: CHEM 1020 OR PHYS 1112 OR PHYS 1312☐	3										
CHEM☐	1020☐	General Chemistry I☐	3	3								3	
PHYS☐	1112☐	General Physics I with Calculus☐	3										
PHYS	1312	Honors General Physics I	3										
LANG	2030	Technical Communication I	3		3							3	
MATH☐ ☐	☐ ☐	Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND☐ (MATH 1014 OR MATH 1024)] OR [MATH 1020]☐	4-7										
MATH☐	1012☐	Calculus IA☐	4										
MATH☐	1013☐	Calculus IB☐	3	3	3							6	
MATH☐	1014☐	Calculus II☐	3										
MATH☐	1020☐	Accelerated Calculus☐	4										
MATH☐	1023☐	Honors Calculus I☐	3										
MATH	1024	Honors Calculus II	3										
MATH	2011	Introduction to Multivariable Calculus	3				3					3	
MATH	2111	Matrix Algebra and Applications	3			3						3	
SENG		Engineering Introduction course (If the students take an introduction course included in their major, this course can be counted towards their major requirement.)	3-4		3							3	
		Required credits for Engineering Fundamental Courses	22-28	9	6	6	3	0	0	0	0	24	
Major Required Courses and Electives													
IEDA	1010	Academic and Professional Development I	0			0	0					0	
IEDA	1020	Academic and Professional Development II	0					0	0			0	
IEDA	1901	Industrial Training and Experience	0									0	
IEDA	2520	Probability for Engineers	3			3						3	
IEDA	2540	Statistics for Engineers	3				3					3	
IEDA	3010	Prescriptive Analytics	3					3				3	
IEDA	3230	Engineering Economics and Accounting	3				3					3	
IEDA	3250	Stochastic Models	3					3				3	
IEDA	3300	Industrial Data Systems	3				3					3	
IEDA	3560	Predictive Analytics	3						3			3	
IEDA☐	☐	Note: IEDA 4901 OR IEDA 4920☐	6										
IEDA☐	4901☐	Final Year Thesis☐	6							3	3	6	
IEDA	4920	Decision Analytics Final Year Project	6										
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
ECON☐	☐	Note: ECON 2103 OR ECON 2113☐	3										
ECON☐	2103☐	Principles of Microeconomics☐	3					3				3	
ECON	2113	Microeconomics	3										
LANG	4032	Technical Communication II for IEDA and ISDN	3						3			3	
IEDA/ISOM		Area Electives (5 courses from the specified elective list, of which all 5 courses should be taken from the same area)	15					3	6	6		15	
		Required credits for Major Required Courses and Electives	48	0	0	3	9	12	12	9	3	48	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4			3						3	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
		Required credits for DMCA Recommended Background Courses	10-12	0	0	3	0	0	0	0	0	3	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3				3					3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0							0	0	0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/ SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits DMCA Electives	12-15						3	3	6	12	
		Required credits for DMCA Required Courses and Electives	21	0	0	0	3	3	3	3	6	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	5	3	3	3	0	3	6	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1; Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
		Sub-total for University CORE	30	4	8	3	3	3	0	3	6	30	

	Term load (excl. free credits)								
	13	14	15	18	18	15	15	15	
					126#				

<< *Declaration of major*

Note:

\# 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 for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.

2022-23 DA+DMCA (4Y) (2022-23 intake)

The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< *Declaration of major*

School:		School of Engineering		Student's Pathways (i.e. Study Pattern)									
Department:		Department of Electronic and Computer Engineering		Pathway 1									
Program:		BEng in Electronic Engineering + Extended Major in Digital Media and Creative Arts		Background: HKDSE 4 Core + 2 Elec (incl. 1/2x PHYS)									
				Profile: Normative. Students to graduate in BEng ELEC with Research Option									
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	Remarks
Major Requirements													
+													
ELEC/MATH		Note: (ELEC 2600 OR ELEC 2600H) OR MATH 2011 OR MATH 2111 OR MATH 2350 OR MATH 2351 (3 courses out of 6)	9-10										
ELEC	2600	Probability and Random Processes in Engineering	4				3	3	3			9	
ELEC	2600H	Honors Probability and Random Processes in Engineering	4										
MATH	2011	Introduction to Multivariable Calculus	3										
MATH	2111	Matrix Algebra and Applications	3										
MATH	2350	Applied Linear Algebra and Differential Equations	3										
MATH	2351	Introduction to Differential Equations	3										
COMP		Note: COMP 1021 OR COMP 1022P	3										
COMP	1021	Introduction to Computer Science	3	3								3	
COMP	1022P	Introduction to Computing with Java	3										
COMP		Note: COMP 2011 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4				4					4	
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
LANG	2030	Technical Communication I	3			3						3	
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7										
MATH	1012	Calculus IA	4										
MATH	1013	Calculus IB	3	3	3							6	
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 1112 OR PHYS 1312	3										
PHYS	1112	General Physics I with Calculus	3	3								3	
PHYS	1312	Honors General Physics I	3										
PHYS		Note: PHYS 1114 OR PHYS 1314	3										
PHYS	1114	General Physics II	3		3							3	
PHYS	1314	Honors General Physics II	3										
SENG		Engineering Introduction course (If the students take an introduction course included in their major, this course can be counted towards their major requirement.)	3-4			3						3	
Required credits for Engineering Fundamental Courses			32-38	9	9	6	7	3	0	0	0	34	
Major Required Courses and Electives													
ELEC	1100	Introduction to Electro-Robot Design	4			4						4	
ELEC	1200	A System View of Communications: from Signals to Packets	4				4					4	
ELEC		Note: ELEC 2100 OR ELEC 2100H	4										
ELEC	2100	Signals and Systems	4					4				4	
ELEC	2100H	Honors Signals and Systems	4										
ELEC	2350	Introduction to Computer Organization and Design	4					4				4	
ELEC	2400	Electronic Circuits	4				4					4	
ELEC	2910	Academic and Professional Development I	0			0	0					0	
ELEC		Note: [ELEC 2991 AND (ELEC 4900 OR ELEC 4901)] OR [ELEC 4910] (Students taking the Research Option must take ELEC 4901)	6										1) "0" refers to ELEC2991. 2) Students should complete safety training and internship/industrial training to get pass of ELEC2991. ELEC2991 is not required for students taking ELEC4910 but they should complete the safety training in order to get full pass of the course. 3) 3* = 1 credit in year 3 Summer + 2 credits in year 4
ELEC	2991	Industrial Experience (Electronic Engineering)	0				0	0	0	3*	3	6	
ELEC	4900	Final Year Design Project	6										
ELEC	4901	Final Year Thesis	6										
ELEC	4910	Co-op Program	6										
ELEC	3910	Academic and Professional Development II	0					0	0			0	
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
LANG	4031	Technical Communication II for ECE & CPEG	3							3		3	
ELEC		ELEC 3000-level or above Electives (Courses of the subject and level as specified, out of which at least 2 courses must be at 4000-level. ELEC 4940 cannot be used to count towards this elective requirement)	21					4	11	3	3	21	
Required credits for Major Required Courses and Electives			50	0	0	4	8	12	11	9	6	50	
Option Requirements													
Research Option													
ELEC	5900	Modern Engineering Research Methodologies	1						1			1	
		Advanced Elective Courses approved by advisor (at least one UROP course taken prior to the commencement of Final Year Thesis, and one PG-level course)	6						0	3	3	6	
Required credits for Research Option			7	0	0	0	0	0	1	3	3	7	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4				(4)					0	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
Required credits for DMCA Recommended Background Courses			10-12	0	0	0	0	0	0	0	0	0	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3						3			3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0							0		0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/ SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits. DMCA Electives	12-15						3	3	6	12	advise students to take ELEC4130 to fulfill both ELEC+DMCA curriculum
Required credits for DMCA Required Courses and Electives			21	0	0	0	0	3	6	3	6	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	5	6	3	0	3	3	3	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1 , Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
Sub-total for University CORE			30	4	8	6	3	0	3	3	3	30	
Term load (excl. free credits)				13	17	16	18	18	21	18	18		
				**135 (w/o option)	142 (w/ option)#**									

<< *Declaration of major*

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 for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.*

The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< *Declaration of major*

School:		School of Engineering					Student's Pathways (i.e. Study Pattern)							
Department:		Department of Industrial Engineering and Logistics Management					Pathway 1							
Program:		BEng in Industrial Engineering and Engineering Management + Extended Major in Digital Media and Creative Arts					Background: HKDSE 4 Core + 2 Elec Profile: Normative							

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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP		Note: COMP 1021 OR COMP 1022P OR COMP 2011 OR COMP 2012H	3-5										
COMP	1021	Introduction to Computer Science	3	3								3	
COMP	1022P	Introduction to Computing with Java	3										
COMP	2011	Programming with C++	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
CHEM/PHYS		Note: CHEM 1020 OR PHYS 1112 OR PHYS 1312	3										
CHEM	1020	General Chemistry I	3	3								3	
PHYS	1112	General Physics I with Calculus	3										
PHYS	1312	Honors General Physics I	3										
LANG	2030	Technical Communication I	3		3							3	
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7										
MATH	1012	Calculus IA	4	3	3							6	
MATH	1013	Calculus IB	3										
MATH	1014	Calculus II	3										
MATH	1020	Accelerated Calculus	4										
MATH	1023	Honors Calculus I	3										
MATH	1024	Honors Calculus II	3										
MATH	2011	Introduction to Multivariable Calculus	3				3					3	
MATH	2111	Matrix Algebra and Applications	3			3						3	
SENG		Engineering Introduction course (If the students take an introduction course included in their major, this course can be counted towards their major requirement.)	3-4			3						3	
		Required credits for Engineering Fundamental Courses	22-28	9	6	6	3	0	0	0	0	24	
Major Required Courses and Electives													
IEDA	1010	Academic and Professional Development I	0			0	0					0	
IEDA	1020	Academic and Professional Development II	0					0	0			0	
IEDA	1901	Industrial Training and Experience	0									0	
IEDA	2520	Probability for Engineers	3			3						3	
IEDA	2540	Statistics for Engineers	3				3					3	
IEDA	3010	Prescriptive Analytics	3					3				3	
IEDA	3230	Engineering Economics and Accounting	3				3					3	
IEDA	3250	Stochastic Models	3					3				3	
IEDA	3300	Industrial Data Systems	3				3					3	
IEDA	4100	Integrated Production Systems	3						3			3	
IEDA	4130	System Simulation	3						3			3	
IEDA		Note: IEDA 4901 OR IEDA 4960 (Students taking the Research Option must take IEDA 4901)	6							3	3	6	
IEDA	4901	Final Year Thesis	6										
IEDA	4960	Industrial Engineering and Engineering Management Final Year Project	6										
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
ECON		Note: ECON 2103 OR ECON 2113	3										
ECON	2103	Principles of Microeconomics	3					3				3	
ECON	2113	Microeconomics	3										
LANG	4032	Technical Communication II for IEDA and ISDN	3						3			3	
IEDA		Industrial Engineering Electives (Courses from the specified elective list, of which at least 15 credits should be taken from 1 of the 2 areas and at least 6 credits outside that area.)	21					3	6	6	6	21	
		Required credits for Major Required Courses and Electives	57	0	0	3	9	12	15	9	9	57	
Option Requirements													
Financial Engineering Option													
IEDA	3330	Introduction to Financial Engineering	3					3				3	
IEDA/FINA/ISOM/RMBI		Financial Engineering Electives (2 courses from the specified elective list)	6							3	3	6	
		Required credits for Financial Engineering Option	9	0	0	0	0	3	0	3	3	9	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4			3						3	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
		Required credits for DMCA Recommended Background Courses	10-12	0	0	3	0	0	0	0	0	3	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3				3					3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0							0	0	0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits DMCA Electives	12-15						3	3	6	12	
		Required credits for DMCA Required Courses and Electives	21	0	0	0	3	3	3	3	6	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	8	6	0	3	0	3	3	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1; Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
		Sub-total for University CORE	30	4	11	6	0	3	0	3	3	30	
		Term load (excl. free credits)		13	17	18	15	21	18	18	21		
		135 (w/o option) | 144 (w/ option)#											

<< *Declaration of major*

Note:

\# 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 for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.*

The Hong Kong University of Science and Technology
School of Engineering
An Example on Student's Pathway (as of Fall 2022-23)

<< *Declaration of major*

School:	School of Engineering		Student's Pathways (i.e. Study Pattern)						
Department:	Department of Mechanical and Aerospace Engineering		Pathway 1						
Program:	BEng in Mechanical Engineering + Extended Major in Digital Media and Creative Arts		Background: HKDSE 4 Core + 2 Elec (incl. 1/2x PHYS) Profile: Normative. Students to graduate in BEng MECH with Engineering Design Option						

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	Remarks
Major Requirements													
Engineering Fundamental Courses													
COMP		Note: COMP 1021 OR COMP 1022P OR COMP 2011 OR COMP 2012H	3-5										
COMP	1021	Introduction to Computer Science	3	3								3	
COMP	1022P	Introduction to Computing with Java	3										
COMP	2011	Programming with C++	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
LANG	2030	Technical Communication I	3			3						3	
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7										
MATH	1012	Calculus IA	4	3	3							6	
MATH	1013	Calculus IB	3										
MATH	1014	Calculus II	3										
MATH	1020	Accelerated Calculus	4										
MATH	1023	Honors Calculus I	3										
MATH	1024	Honors Calculus II	3										
MATH	2011	Introduction to Multivariable Calculus	3			3						3	
MATH		Note: MATH 2111 OR MATH 2350 OR MATH 2351	3										
MATH	2111	Matrix Algebra and Applications	3				3					3	
MATH	2350	Applied Linear Algebra and Differential Equations	3										
MATH	2351	Introduction to Differential Equations	3										
PHYS		Note: PHYS 1112 OR PHYS 1312	3										
PHYS	1112	General Physics I with Calculus	3		3							3	
PHYS	1312	Honors General Physics I	3										
CHEM/LIFS/PHYS		Science 1000-level course (1 course from the specified course list)	3-4		3							3	
		Required credits for Engineering Fundamental Courses	22-28	6	9	6	3	0	0	0	0	24	
Major Required Courses and Electives													
MECH	1906	Mechanical Engineering for Modern Life	3	3								3	
MECH	1990	Industrial Training	0			0*	[0^]					0	
MECH	2020	Statics and Dynamics	3			3						3	
MECH	2040	Solid Mechanics I	3				3					3	
MECH	2210	Fluid Mechanics	3				3					3	
MECH	2310	Thermodynamics	3			3						3	
MECH	2410	Engineering Materials I	3				3					3	
MECH	2520	Design and Manufacturing I	3				3					3	
MECH	3030	Mechanisms of Machinery	3					3				3	
MECH		Note: MECH 3300 OR MECH 3420 OR MECH 3520 OR MECH 3710	3										
MECH	3300	Energy Conversion	3					3				3	
MECH	3420	Engineering Materials II	3										
MECH	3520	Design and Manufacturing II	3										
MECH	3710	Manufacturing Processes and Systems	3										
MECH	3310	Heat Transfer	3					3				3	
MECH	3610	Control Principles	3					3				3	
MECH	3630	Electrical Technology	3						3			3	
MECH	3830	Laboratory	3						3			3	
MECH	3907	Mechatronic Design and Prototyping	3						3			3	
MECH	4900	Final Year Design Project	6							3	3	6	
ELEC	2420	Basic Electronics	3			3						3	
ENGG	2010	Engineering Seminar Series	0			0	0	0	0			0	
LANG	4034	Technical Communication II for Mechanical and Aerospace Engineering	3						3			3	
		Required credits for Major Required Courses and Electives	54	3	0	9	12	12	12	3	3	54	
Option Requirements													
Engineering Design Option													
MECH		MECH Electives in Engineering Design (3 courses from the specified elective list. Courses taken as Major Required Courses or Elective Courses of other MECH Options may not be counted towards this elective requirement.)	9							3	6	9	
		Required credits for Engineering Design Option	9	0	0	0	0	0	0	3	6	9	
DMCA Requirements													
Recommended Background Courses													
COMP/ISOM		Note: COMP 1021 OR COMP 1022P OR ISOM 3230	3										
COMP	1021	Introduction to Computer Science	3	(3)								0	
COMP	1022P	Introduction to Computing with Java	3										
ISOM	3230	Business Applications Programming	3										
MATH		Note: MATH 1014 OR MATH 1020 OR MATH 1024	3-4										
MATH	1014	Calculus II	3		(3)							0	
MATH	1020	Accelerated Calculus	4										
MATH	1024	Honors Calculus II	3										
COMP		Note: COMP 2011 OR COMP 2012 OR COMP 2012H	4-5										
COMP	2011	Programming with C++	4			4						4	
COMP	2012	Object-Oriented Programming and Data Structures	4										
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5										
		Required credits for DMCA Recommended Background Courses	10-12	0	0	4	0	0	0	0	0	4	
Major Required Courses and Electives													
EMIA	2010B	Cross-disciplinary Seminar in Digital Media and Creative Arts	0			0						0	
EMIA	2020	Cross-disciplinary Design Thinking	3				3					3	
EMIA	2200	Introduction to Digital Media	3					3				3	
EMIA		Note: EMIA 4990 OR EMIA 4991	0-3										
EMIA	4990	Interdisciplinary Capstone Design	0							0		0	
EMIA	4991	Interdisciplinary Capstone Project	3										
SBM/SENG/SSCI/IPO		Note: Students taking EMIA4990 should take a minimum of 12 credits; students taking EMIA4991 should take a minimum of 9 credits DMCA Electives	12-15					3	3	3	3	12	
		Required credits for DMCA Required Courses and Electives	21	0	0	0	3	6	3	3	3	18	
University CORE													
CORE	C3 - C12	U CORE - Others	24	1	2			3	3	9	6	24	The credit load of CORE1905 (HMW) will usually be spread in the following pattern: Fall: 1; Spring: 2
CORE	C1 & C2	U CORE - English Language	6	3	3							6	
		Sub-total for University CORE	30	4	5	0	0	3	3	9	6	30	
		Term load (excl. free credits)		13	14	19	18	21	18	18	18		
		133 (w/o option) | 142 (w/ option)#											

<< *Declaration of major*

Notes:

[ ] denotes the course is also offered in other terms as indicated and students may take the course in one of these terms subject to advice by the program office.

* Courses offered in winter term

^ Courses offered in summer 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 for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.*

2022-23 MECH+DMCA (4Y) (2022-23 intake)