AY2025-2026
CURRICULUM FOR DATA SCIENCE & ARTIFICIAL INTELLIGENCE
With a Second Major in Sustainability

SUMMARY OF ACADEMIC UNIT REQUIREMENT							
Year of Study	Major		Sustainability	ICC			BDE	Total AU
	Core	MPE		Common-Core	Professional Series	Care, Serve & Learn		
1	16	0	9	6	3	0	0	34
2	26	0	6	8	2	0	0	42
3	10	6	3	0	10	3	0	32
4	8	12	12	0	1	0	0	33
Total	60	18	30	14	16	3	0	141

Recommended Course Schedule

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite
SC1003	Introduction to Computational Thinking & Programming	Professional Series	3	Nil
MH1805	Calculus	Core	4	Nil
MH1812	Discrete Mathematics	Core	3	Nil
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
	Sustainability - Core	Sustainability	3	Refer to syllabus
			15	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite
SC1007	Data Structures & Algorithms	Core	3	SC1003
SC3021	Data Science Fundamentals (Only for U24 and after)	Core	3	SC1003
SC2002	Object Oriented Design & Programming	Core	3	SC1003 OR SC1007
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0015	Health & Wellbeing	C-Core	2	Nil
	Sustainability - Core	Sustainability	3	Refer to syllabus
	Sustainability - Core	Sustainability	3	Refer to syllabus
			19	

Year 1 Total AU   **34**

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite
SC2207	Introduction to Databases	Core	3	SC2001 (co-requisite)
SC2001	Algorithm Design & Analysis	Core	3	SC1007 & MH1812
MH2500	Probability and Introduction to Statistics	Core	4	MH1805
MH2802	Linear Algebra for Scientists	Core	3	Nil
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	C-Core	2	Nil
	Sustainability - Core	Sustainability	3	Refer to syllabus
			21	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite
SC3000	Artificial Intelligence	Core	3	SC1007 & MH2500
SC2006	Software Engineering	Core	3	SC2002 (co-requisite)
MH3500	Statistics	Core	4	MH2500
MH3511	Data Analysis with Computer	Core	3	MH2500
HW0218	Communication Across the Sciences	Professional Series	2	CC0001
CC0007	Science & Technology for Humanity	C-Core	3	Nil
	Sustainability - Core	Sustainability	3	Refer to syllabus
CSL	CSL (service learning course)- Part 1	CSL	-	(Continue in Semester 2)
			21	

Year 2 Total AU   **42**

YEAR 3 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC4000	Machine Learning	Core	3	SC1004 & SC1007 & SC2000 OR MH2808 & SC1007 & SC2000
SC4020	Data Analytics and N SC3000 SC3000	Core	3	SC2001
MH2100	Calculus III	Core	4	MH1805
MH/SCxxxx	Major Prescribed Elective	MPE	3	Year 3 standing
MH/SCxxxx	Major Prescribed Elective	MPE	3	Year 3 standing
	Sustainability - Elective	Sustainability	3	Refer to syllabus
	CSL (service learning course)- Part 2	CSL	3	(Continue from Semester 1)
			22	

YEAR 3 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SD3920	Professional Internship (Graded)	Professional Series	10	Year 3 Standing
			10	
		Year 3 Total AU	**32**	

YEAR 4 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC4079	Final Year Project (Part 1)	Core	4	Year 4 Standing
MH/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
MH/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
	Sustainability - Elective	Sustainability	3	Refer to syllabus
	Sustainability - Elective	Sustainability	3	Refer to syllabus
ML0015	Profession Preparation	Professional Series	1	Nil
			17	

YEAR 4 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC4079	Final Year Project (Part 2)	Core	4	Year 4 Standing
MH/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
MH/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
	Sustainability - Elective	Sustainability	3	Refer to syllabus
	Sustainability - Interdisciplinary Project	Sustainability	3	Refer to syllabus
			16	
		Year 4 Total AU	**33**	

Important Note for DSAI MPE:

1. Minimum 18 AU of MPE is required.

2. Different combination between 3 & 4 AU MPE is allowed for U21 and later Cohorts.

3. It is also possible to choose all 3 AU MPE to fulfil MPE requirement.

4. Students are allowed to fulfil MPE requirement by over 1 or 2 AU.

      Example: when students have 17 AU MPE currently, they are allowed to take one more 3 AU MPE.

MPE Structure of DSAI (U24 and after)					
Course Code		**Type**	**AU**		**Remarks**
MH/SCxxxx		MPE-1	3		Any MPE
MH/SCxxxx		MPE-2	3		Any MPE
MH/SC4xxx		MPE-3	3		MPE (Choose within Level 4 courses)
MH/SC4xxx		MPE-4	3		MPE (Choose within Level 4 courses)
MH/SC4xxx		MPE-5	3		MPE (Choose within Level 4 courses)
MH/SC4xxx		MPE-6	3		MPE (Choose within Level 4 courses)
		Total	**18**		
Please refer to the DSAI MPE Course List on CCDS website.					

Sustainability Course Listing					
Course Code	**Course Title**	**Type**		**AU**	**Pre-requisite**
	Sustainability - Core	BDE		3	Refer to syllabus
	Sustainability - Elective	BDE		3	Refer to syllabus
	Sustainability - Interdisciplinary Project	BDE		3	Refer to syllabus
Please refer to the Second Major in Sustainability webiste for Sustainability Course Listing: https://www.ntu.edu.sg/ase/admissions/undergraduate-programmes/second-major-in-sustainability#Content_C013_Col00					