AY2025 2026

CURRICULUM FOR DATA SCIENCE & ARTIFICIAL INTELLIGENCE WITH USP

SUMMARY OF ACADEMIC UNIT REQUIREMENT

Year of Study	Core	MPE	USP Requirements		ICC			BDE	Total AU
			USP Core	USP PE	Common-Core	Professional Series	Care, Serve, Learn		
1	16	0	11	0	0	3	0	3	33
2	26	0	0	6	5	0	0	0	37
3	10	6	0	0	0	10	3	3	32
4	8	12	0	6	0	1	0	4	31
Total	60	18	11	12	5	14	3	10	133

Recommended Course Schedule

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite
SC1003	Introduction to Computational Thinking & Programming	PS	3	Nil
MH1805	Calculus	Core	4	Nil
MH1812	Discrete Mathematics	Core	3	Nil
SP0001	Writing and Reasoning	USP Core	3	Nil
SP0008	Living Well	USP Core	2	Refer to Class Schedule
	Broadening and Deepening Elective	BDE	3	Refer to Class Schedule
			18	

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
SP0002	Ethics	USP Core	3	Nil
SP0007	Fieldwork and Documentation: Topics In Sustainability	USP Core	3	Nil
			15	

Year 1 Total AU **33**

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	
MH2802	Linear Algebra for Scientists	Core	3	
	USP Prescribed Elective	USP PE	3	
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	U-Core	2	Nil
			18	

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
	USP Prescribed Elective	USP PE	3	
CC0007	Science & Technology for Humanity	U-Core	3	Read as SP0061 under ICC Core
	CSL (service learning course)- Part 1	CSL	-	Nil
			19	

Year 2 Total AU **37**

YEAR 3 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite
SC4000	Machine Learning	Core	3	SC1004 & SC1007 & SC2000
SC4020	Data Analytics and Mining	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
	Broadening and Deepening Elective	BDE	3	Refer to Class Schedule
	CSL (service learning course)- Part 2	CSL	3	Nil
			22	

YEAR 3 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite
SD3920	Professional Internship (Graded)	PS	10	Year 3 Standing
			10	

Year 3 Total AU **32**

YEAR 4 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC3099	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
	USP Prescribed Elective	USP PE	3	
ML0015	Professsion Preparation	PS	1	Nil
	Broadening and Deepening Elective	BDE	3	
			17	

YEAR 4 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC3099	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
	USP Prescribed Elective	USP PE	3	
	Broadening and Deepening Elective	BDE	0	Refer to Class Schedule
			13	
	Year 4 Total AU		**30**	

Important Note for DSAI MEP:

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/SCxxxx	MPE-3	3	MPE (Choose within Level 4 courses)
MH/SCxxxx	MPE-4	3	MPE (Choose within Level 4 courses)
MH/SCxxxx	MPE-5	3	MPE (Choose within Level 4 courses)
MH/SCxxxx	MPE-6	3	MPE (Choose within Level 4 courses)
	Total	**18**	
Please refer the CSC MPE Courses and Specialization on CCDS website.			