

AY2021-2022 Curriculum for Data Science & Artificial Intelligence

Year of Study	Major		Interdisciplinary Collaborative Core		Broadening and Deepening Elective	Total AU
	Core	Prescribed Electives (MPE)#	Common Core (CC)	Foundational Core (FC)		
1	16	0	9	3	6	34
2	26	0	8	2	0	36
3	10	6	0	10	3	29
4	8	12	0	0	12	32
Total	60	18	17	15	21	131

#MPE to fulfill requirement: minimum 6 MPEs and 18AUs

Suggested Study Plan

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
SC1003	Introduction to Computational Thinking & Programming	C	3	Nil
MH1805	Calculus	C	4	Nil
MH1812	Discrete Mathematics	C	3	Nil
CC0001	Inquiry and Communication in an Interdisciplinary World	C-Core	2	Nil
CC0002	Navigating the Digital World	C-Core	2	Nil
	Broadening & Deepening Elective	BDE	3	
			17	

YEAR 1 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
SC1007	Data Structures & Algorithms	C	3	SC1003
SC2002	Object Oriented Design and Programming	C	3	SC1003
SC1015	Introduction to Data Science & AI	F-Core	3	SC1003
CC0003	Ethics & Moral Reasoning in a Multi-Cultural World	C-Core	2	Nil
CC0005	Healthy Living & Mental Well-being in an Aging Society	C-Core	3	Nil
	Broadening & Deepening Elective	BDE	3	Nil
			17	

YEAR 2 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
SC2001	Algorithm Design and Analysis	C	3	SC1007, MH1812
SC2006	Software Engineering	C	3	SC2002 (Corequisite)
MH2500	Probability and Introduction to Statistics	C	4	MH1805
MH2802	Linear Algebra for Scientists	C	3	Nil
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
ML0004	Career and Entrepreneurial Development for the Future World	C-Core	2	Nil
			18	

YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
SC2207	Introduction to Database Systems	C	3	SC2001 (Corequisite)
SC3000	Artificial Intelligence	C	3	SC1007, SC1015, MH2500
MH3500	Statistics	C	4	MH2500
MH3511	Data Analysis with Computer	C	3	MH2500
HW0218	Communication Across the Sciences	F-Core	2	CC0001
CC0007	Science & Technology for Humanity	C-Core	3	Nil
			18	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4000	Machine Learning	C	3	SC1007, MH2802
SC4020	Data Analytics and Mining	C	3	SC2001
MH2100	Calculus III	C	4	MH1805
MH/SC4xxx	Major Prescribed Elective	MPE	6	Year 3 standing
	Broadening & Deepening Elective	BDE	3	Nil
			19	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SD3079	Professional Internship	F-Core	10	Year 3 standing
			10	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project	C	4	Year 4 standing
MH/SC4xxx	Major Prescribed Elective	MPE	6	Year 3 standing
	Broadening & Deepening Elective	BDE	6	
			16	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project	C	4	Year 4 standing
MH/SC4xxx	Major Prescribed Elective	MPE	6	Year 3 standing
	Broadening & Deepening Elective	BDE	6	
			16	