

AY2019-2020 Curriculum Data Science & Artificial Intelligence

Year of Study	Core	MPE	GER-Core	GER-PE	UE	Total AU
1	19	0	5	6	6	36
2	30	0	3	0	3	36
3	16	7	1	0	6	30
4	14	17	2	0	0	33
Total	79	24	11	6	15	135

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
MH1812	Discrete Mathematics	C	3	Nil
CZ1003	Introduction to Computational Thinking	C	3	Nil
MH1805	Calculus	C	4	Nil
HW0128	Scientific Communication I	GER-Core	2	Nil
	GER Prescribed Elective	GER-PE	3	Nil
	Unrestricted Elective	UE	3	Nil
			18	

YEAR 1 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
MH2802	Linear Algebra for Scientists	C	3	Nil
CZ1016	Introduction to Data Science	C	3	CZ1003
CZ1007	Data Structures	C	3	CZ1003
	GER Prescribed Elective	GER-PE	3	Nil
	Unrestricted Elective	UE	3	Nil
	Unrestricted Elective	UE	3	Nil
			18	

YEAR 2 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
MH2100	Calculus III	C	4	MH1805
MH2500	Probability and Statistics to Statistics	C	4	MH1805
CZ2001	Algorithms	C	3	CZ1007, MH1812
CZ2002	Object Oriented Design & Programming	C	3	CZ1007
CZ2004	Human Computer Interaction	C	3	Nil
PS8001	Defence Science	GER Core	3	CZ1003
			20	

YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
MH3500	Statistics	C	4	MH2500
MH3511	Data Analysis with Computer	C	3	MH2500
CZ2006	Software Engineering	C	3	CZ2002 (Corequisite)
CZ2007	Introduction to Databases	C	3	CZ2101 (Corequisite)
HW0228	Scientific Communication II	GER-Core	2	HW0128, Year 3 Standing
ML0003	Kickstart your Career Success	GER-Core	1	Online course
ET0001	Enterprise & Innovation	GER-Core	1	Online course
			17	

YEAR 3 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
CZ3005	Artificial Intelligence	C	3	CZ1003, CZ2001
CZ4032	Data Analytics and Mining	C	3	CZ2001
MH/PHxxxx	Prescribed Elective	MPE	4	Year 3 standing
CZ4XXX	Prescribed Elective	MPE	3	Year 3 standing
GC0001	Sustainability: Seeing Through the Haze	GER-Core	1	online course
	Unrestricted Elective	UE	3	Nil
			17	

YEAR 3 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
CD3179	Professional Internship	C	10	ML0003, Year 3 standing
			10	

YEAR 4 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
CZ4079	Final Year Project	C	4	Final year standing
CZ4042	Neural Networks & Deep Learning	C	3	CZ1007, MH2802
MH/PHxxxx	Prescribed Elective	MPE	4	Year 3 standing
CZ4XXX	Prescribed Elective	MPE	3	Year 3 standing
CZ4XXX	Prescribed Elective	MPE	3	Year 3 standing
HY0001	Ethics & Moral Reasoning	GER-Core	1	online course
			21	

YEAR 4 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
CZ4079	Final Year Project (cont)	C	4	Final Year Standing
CZ4041	Machine Learning	C	3	CZ1007 & MH2802
MH/PHxxxx	Prescribed Elective	MPE	4	Year 3 standing
CZ4XXX	Prescribed Elective	MPE	3	Year 3 standing
	Unrestricted Elective	UE	3	Nil
			17	