

Generic Study Plan for BSc. in Data Science and AI

Total = 120 credit hours

Year 1 - First Semester				Year 1 - Second Semester			
Course #.	Course Title	Pre-req.	Cr.	Course #.	Course Title	Pre-req.	Cr.
ESPU1081	ESP1		3	MATH110	Calculus II	MATH105	3
MATH105	Calculus I	-	3	STAT210	Probability and Statistics	MATH110	3
CSBP119	Algorithms and Prob. Solving	-	3	CSBP219	Object-Oriented Prog.	CSBP119	3
	Gen. Chemistry (CHEM111) or Physics (PHYS105) or Biology (BIOC100)	-	3	GEIT112	Fourth Industrial Revolution		3
GESU121	Sustainability		3	Math140	Linear Algebra		3
Semester Credit Hours			15	Semester Credit Hours			15
Year 2 - First Semester				Year 2 - Second Semester			
Course #.	Course Title	Pre-Req.	Cr.	Course #.	Course Title	Pre-Req.	Cr.
Elective	Cultural Elective 1		3	CSBP340	Database Systems	CSBP319 or CSBP323	3
CSBP323	Data Structures	CSBP219	3	SWEB450	Analysis of Algorithms	CSBP319 or CSBP323	3
MATH240	Applied Algebra	Math 140 & MATH110	3	STAT270	Introduction to Stat. Computing	STAT210 & (STAT240 or STAT360)	3
MATH290	Computational Math	MATH110	3	CSBP224	Intro. to DS	CSBP119	3
STAT240	Data Exploration and Analysis	STAT 202 Or STAT210	3	CENG202	Discrete Mathematics	MATH105	3
Semester Credit Hours			15	Semester Credit Hours			15
Year 3 - First Semester				Year 3 - Second Semester			
Course #.	Course Title	Pre-Req.	Cr.	Course #.	Course Title	Pre-Req.	Cr.
CSBPxx	Spec. Elective 1		3	CSBP320	Data Mining	STAT210	3
CSBP301	AI	CSBP319 or CSBP 323	3	ITBP324	Cloud Computing Fund.	CSBP219	3
HSS105	Emirates Studies		3	CSBP411	Machine Learning	CSBP301	3
	Supp. Elective 1		3	ISEC411	Privacy and Anonymity (Advanced Elective)	CSBP301	3
ITBP418	Entrepreneurship in IT (Substitute ENTR320)	ITBP280 or ITBP301 or CSBP 224	3		Supp. Elective 2		3
Semester Credit Hours			15	Semester Credit Hours			15
Year 4 - First Semester				Year 4 - Second Semester			
Course #.	Course Title	Pre-Req.	Cr.	Course #.	Course Title	Pre-Req.	Cr.
MATH350	Optimization Methods	Math110	3	ITBP481	Senior Graduation Project II	ITBP480	3
	Supp. Elective 3		3	CSBPxxx	Spec. elective 3		3
	Culture Elective 2		3	ISLM100	Islamic Culture	-	3
ITBP480	Senior Graduation Project I	STAT210	3				
CSBPxxx	Spec. elective 2		3				
Semester Credit Hours			15	Semester Credit Hours			9
Year 5 - First Semester							
CSBP495: Internship (6 credit hours)							
(Students are not Allowed to register any additional courses during their Internship without the approval of the College)							

*Students must have finished 80 CrHr to register in ITBP480

Specialization Electives (9 CH)			
CSBP441	Applied Computer Vision	3	CSBP301
CSBP475	Advanced topics in AI and Data Science	3	CSBP224
CSBP477	Natural Language Processing	3	CSBP224
CSBP476	Robotics and Intelligent Systems	3	CSBP301
CSBP325	Data visualization	3	CSBP224
General Electives (15 CH)			
Advanced Electives (6 CH)			
MATH350	Optimization Methods	3	MATH110
ISEC411	Privacy and Anonymity	3	CSBP320
Supporting Electives (9 CH)			
MGMT200	Fundamentals of Management	3	
BANA200	Managing with Analytics	3	CSBP 224
MKTG200	Principles of Marketing	3	MKTG200
MKTG320	Consumer Behavior	3	MKTG200
PHI440	Cognitive Science	3	

Cultural Elective Courses		
Social and Behavioral Sciences (3 Cr. Hrs.)		
	AGRB 210	Introduction to Agribusiness
	ECON 110	Principles of Economics
	HSR 140	Introduction to Society and Behavior
	HSR 150	Introduction to Government, Policy, and Urban Studies
	PSY 100	Introduction to Psychology
	GEO 200	World Regional Geography
	GHEP111	Happiness and Wellbeing
Humanities/Fine Art (3 Cr. Hrs.)		
	ARCH 366	History and Theory of Architecture
	HSR 120	Introduction to Heritage and Culture
	HSR 130	Introduction to Language and Communication
	PHI101	Introduction to Philosophy
	HIS 130	Sheikh Zayed; History, Found.& Dev.