



UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

BACHELOR OF SCIENCE IN DATA SCIENCE

EFFECTIVE S.Y. 2018-2019

FIRST YEAR

<i>First Semester</i>								
Course Code		Description	No. of Hours			Units	Pre-requisites	Co-requisites
			Lec	Lab	Total			
DS	111	Introduction to Computer Science	2	3	5	3	None	None
DS	112	Computer Programming	2	3	5	3	None	None
MATH	101	Mathematics in the Modern World	3	0	3	3	None	None
ENG	101	Purposive Communication	3	0	3	3	None	None
SS	105	Life and Works of Rizal	3	0	3	3	None	None
SS	102	Readings in Philippine History	3	0	3	3	None	None
PE	101	Physical Activity Towards Health and Fitness 1	2	0	2	2	None	None
NSTP	101	(CTWS/ROTC 1)	3	0	3	3	None	None
				Total	27	23		

<i>Second Semester</i>								
DS	121	Introduction to Data Science	2	3	5	3	DS111, DS112	None
DS	122	Introduction to Statistical Methods	3	0	3	3	MATH101	
DS	123	Data Structures and Algorithms	2	3	5	3	DS112	None
DS	124	Linear Algebra	3	0	3	3	MATH101	None
ENG	102	Art Appreciation	3	0	3	3	None	None
SS	101	Understanding the Self	3	0	3	3	None	None
PE	102	Physical Activity Towards Health and Fitness 2	2	0	2	2	PE101	None
NSTP	201	CWTS/ROTC 2	3	0	3	3	NSTP101	None
				Total	27	23		



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SECOND YEAR

<i>First Semester</i>								
Course Code		Description	No. of Hours			Units	Pre-requisites	Co-requisites
			Lec	Lab	Total			
DS	211	Linear and Nonlinear Models	2	3	5	3	DS122, DS124	None
DS	212	Object-Oriented Programming	2	3	5	3	DS121, DS123	None
DS	213	Human Computer Interaction	2	3	5	3	DS123	None
MATH	111	Calculus 1	3	0	3	3	DS124	None
FIL	101	Panitikan	3	0	3	3	None	None
ES	101	Science, Technology, and Society	3	0	3	3	None	None
SS	104	Ethics	3	0	3	3	None	None
PE	103	Physical Activity Towards Health and Fitness 3	2	0	2	2	PE101	None
				Total	29	23		

<i>Second Semester</i>								
DS	221	Data Visualization and Storytelling	2	3	5	3	DS211	None
DS	222	Theory of Databases	2	3	5	3	DS211, DS212	None
DS	223	Computer Networking	2	3	5	3	DS111	None
DS	224	Optimization Theory	2	3	5	3	DS211	None
MATH	121	Calculus 2	3	0	3	3	MATH 111	None
FIL	102	Retorika	3	0	3	3	None	None
SS	103	The Contemporary World	3	0	3	3	None	None
PE104	201	Physical Activity Towards Health and Fitness 4	2	0	2	2	PE101	None
				Total	29	23		



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THIRD YEAR

<i>First Semester</i>								
Course Code		Description	No. of Hours			Units	Pre-requisites	Co-requisites
			Lec	Lab	Total			
DS	311	Data Mining and Wrangling	2	3	5	3	DS221	DS314
DS	312	Exploratory Data Analysis	2	3	5	3	DS211	None
DS	313	Multivariate Data Analysis	2	3	5	3	DS211	None
DS	314	Machine Learning 1	2	3	5	3	MATH121	None
DS	315	Advanced Database Management System	2	3	5	3	DS222	None
DS	316	Elective 1	2	3	5	3	DS224	None
ES	102	Environmental Science	3	0	3	3	None	None
				Total	29	21		

<i>Second Semester</i>								
DS	321	Data Analytics	2	3	5	3	DS311, DS312, DS313	
DS	322	Statistical Computing	2	3	5	3	DS312, DS313	
DS	323	Machine Learning 2 (Deep Learning)	2	3	5	3	DS314	
DS	324	Cloud Computing	2	3	5	3	DS223	None
DS	325	Elective 2	2	3	5	3	DS311	None
DS	326	Elective 3	2	3	5	3	DS311, DS315	None
FreeElec	411	Foreign Language	3	0	3	3	None	None
				Total	33	21		

<i>Summer</i>								
DS	331	PRACTICUM (Data Science in Practice)	0	240	240	6	3 rd Year Standing	None
				Total	6	6		



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FOURTH YEAR

First Semester

Course Code		Description	No. of Hours			Units	Pre-requisites	Co-requisites
			Lec	Lab	Total			
DS	411	Predictive Analytics	2	3	5	3	DS321, DS323	None
DS	412	Time Series Analysis and Stochastic Processes	2	3	5	3	DS322, DS323	None
DS	413	Elective 4	2	3	5	3	DS324	None
ES	211	Technopreneurship	3	0	3	3	None	None
DS	414	Capstone Project 1	2	3	5	3	DS321, DS322, DS323, DS324	None
				Total	23	15		
<i>Second Semester</i>								
DS	421	Capstone Project 2	3	9	12	6	DS413	None
				Total	12	6		