


TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES
Quezon City
2022 CURRICULUM FOR Bachelor of Science in Data Science and Analytics (BSDSA)

IMPORTANT: Registration in any course/s without all the pre-requisite/s, correct sequence and authorized load shall not be given any credit regardless of the grade/s obtained.

NAME : _____ STUDENT NO : _____

	COURSE CODE		DESCRIPTIVE TITLE	LEC HOURS	LAB HOURS	CREDIT UNITS	PRE-REQUISITE(S)/CO-REQUISITE(S)
FIRST YEAR, FIRST SEMESTER (23 UNITS)							
	GEC	001	Understanding the Self	3	0	3	
	GEC	004	Mathematics in the Modern World	3	0	3	
	GEC	006	Art Appreciation	3	0	3	
	MATH	013	Linear Algebra with MATLAB	2	3	3	
	ITE	011	Introduction to Computing	2	3	3	
	DS	001	Computer Programming 1 (Python)	2	3	3	
	MATH	006	Discrete Mathematics	3	0	3	
	NSTP	001	National Service Training Program 1	(3)	0	(3)	
	PE	001	Physical Activities Toward Health and Fitness 1 (PATHfit 1)	2	0	2	
	TOTAL			20	9	23	
FIRST YEAR, SECOND SEMESTER (23 UNITS)							
	GEC	002	Readings in Philippine History	3	0	3	
	GEC	005	Purposive Communication	3	0	3	
	GEC	008	Ethics	3	0	3	
	SOCSOC	005	Life and Works of Rizal	3	0	3	
	DS	002	Computer Programming 2 (R Programming)	2	3	3	DS 001(P)
	DS	003	Quantitative Introductory Statistics for Data Science	3	0	3	MATH 013(P)
	MATH	016	Calculus 1	3	0	3	MATH 013(P)
	NSTP	002	National Service Training Program 2	(3)	0	(3)	NSTP 001(P)
	PE	002	Physical Activities Toward Health and Fitness 2 (PATHfit 2)	2	0	2	PE 001(P)
	TOTAL			22	3	23	
SECOND YEAR, FIRST SEMESTER (23 UNITS)							
	DS	004	Advanced Data Analytics	2	3	3	DS 003(P)
	DS	005	Data Management	2	3	3	DS 003(P)
	DS	006	Data Visualization	2	3	3	DS 002(P)
	GEE	001	General Education Elective 1	3	0	3	
	MATH	017	Calculus 2	3	0	3	MATH 016(P)
	MATH	009CS	Probability and Statistics	2	3	3	DS 003(P)
	CS	201	Data Structures and Algorithms	2	3	3	DS 001(P)
	PE	003	Physical Activities Toward Health and Fitness 3 (PATHfit 3)	2	0	2	PE 001(P)
	TOTAL			18	15	23	
SECOND YEAR, SECOND SEMESTER (23 UNITS)							
	DS	007	Data Acquisition/Engineering	2	3	3	DS 005(P)
	DS	008	Data Mining and Warehousing	2	3	3	DS 005(P)
	ITE	014	Information Management	2	3	3	DS 005(P)
	ITE	015	Social Issues and Professional Practice	3	0	3	
	GEE	002	General Education Elective 2	3	0	3	
	IE	301B	Applied Statistics	2	3	3	MATH 009CS(P)
	GEC	003	The Contemporary World	3	0	3	
	PE	004	Physical Activities Toward Health and Fitness 4 (PATHfit 4)	2	0	2	PE 001(P)
	TOTAL			19	12	23	
THIRD YEAR, FIRST SEMESTER (22 UNITS)							
	DS	009	Data Story Telling	2	3	3	DS 006(P)
	DS	010	Computational Statistics	2	3	3	MATH 013(P)



COURSE CODE		DESCRIPTIVE TITLE	LEC HOURS	LAB HOURS	CREDIT UNITS	PRE-REQUISITE(S)/CO-REQUISITE(S)
DS	011	Big Data Analytics	2	3	3	DS 004(P)
DS	012	Machine Learning	2	3	3	IE 301B(P)
DS	013	Data Security, Integrity and Privacy	2	3	3	DS 005(P)
DSELEC	001	DS Elective 1	3	3	4	3rd Year Standing, See track for pre-requisite(s)
GEE	003	General Education Elective 3	3	0	3	
TOTAL			16	18	22	
THIRD YEAR, SECOND SEMESTER (22 UNITS)						
IS	005A	Project Management	3	0	3	DS 304(C)
DS	014	Numerical Computing	2	3	3	DS 010(P)
DS	015	Deep Learning	2	3	3	DS 012(P)
DS	016	Research Methods	3	0	3	DS 014(C) DS 015(C)
IT	001	Information Assurance and Security	2	3	3	
DSELEC	002	DS Elective 2	3	3	4	DSELEC 001(P), See track for pre-requisite(s)
GEC	007	Science, Technology, and Society	3	0	3	
TOTAL			18	12	22	
FOURTH YEAR, FIRST SEMESTER (19 UNITS)						
DS	304	Capstone Project 1	2	3	3	DS 016(P)
ITE	013	Application Development and Emerging Technologies	2	3	3	DS 015(P)
DS	017	Complexity Analysis	2	3	3	CS 201(P)
DS	018	Machine Learning fo Business	2	3	3	DS 015(P)
DSELEC	003	DS Elective 3	3	3	4	DSELEC 002(P), See track for pre-requisite(s)
DS	019	Machine Learning (ML) Algorithms and Statistical Methods for Security	2	3	3	DS 012(P)
TOTAL			13	18	19	
FOURTH YEAR, SECOND SEMESTER (9 UNITS)						
DS	402	Internship in Computing	0	18	6	Graduating
DS	400	Capstone Project 2	2	3	3	DS 304(P)
TOTAL			2	21	9	
ELECTIVE COURSES						
Track 1: Financial Analytics						
DS	020	Statistical Applications in Management	3	3	4	3rd Year Standing,IE 301B(P)
DS	021	Business Forecasting with Time Series Analysis	3	3	4	DS 020(P)
DS	022	Operations Research / Optimization	3	3	4	DS 021(P)
TOTAL			9	9	12	
Track 2: Social Media Analytics						
DS	023	Introduction to Social Media Analytics	3	3	4	3rd Year Standing,IE 301B(P)
DS	024	Digital Trace Analytics	3	3	4	DS 023(P)
DS	025	Social Network Analysis	3	3	4	DS 024(P)
TOTAL			9	9	12	
Track 3: Biomedical and Health Analytics						
DS	026	Introduction to Bioinformatics	3	3	4	3rd Year Standing,DS 010(P) IE 301B(P)
DS	027	Public Health Data Analytics	3	3	4	DS 026(P)
DS	028	Research Informatics	3	3	4	DS 027(P)
TOTAL			9	9	12	

CREDENTIALS PRESENTED:

- () F137A () NSO Birth Certificate
- () F138 () HD
- () GMC () TOR

DEFICIENCY/IES:

Evaluated By: _____

Date: _____

Received By: _____

Date: _____

LEGEND

- P = Pre-requisite
- C = Co-requisite

NOTE: EVALUATION IS TENTATIVE AND MAY BE REVISED FOR SOME VALID CAUSES OR REASONS OR IF OMISSIONS AND/OR LACK OF UNITS CREDITED BE DISCOVERED LATER.