

Diploma in Programming

Tr	Course Name	Course Components	Pre-requisites	Difficulty Level (Newbie)	Difficulty Level (Programmer)	What you've to do?	Hours per week	Outcomes	What After this?	My Advice
	Database Management Systems	Theory Assignments Coding Assignments OPPE	Python SQL	Easy	Easy	Watch lectures at 1.25x, Practice, use notes and AI Chatbots.	7 - 10	Relational Algebra SQL	Practice and Create Projects	For OPPE, practice is needed, Python connector question is important.
	Programming, Data Structures and Algorithms using Python	Theory Assignments Coding Assignments OPPE	Python Basics of DSA	Moderate	Moderate	Watch lectures at 1.25x, understand the concepts, Implement from Scratch and Practice.	10 - 15	DSA	Learn, Practice and Participate in Coding Competitions	OPPE is really easy, no passing criteria, but practice more on Hackerrank & Leetcode.
	Modern Application Development I	Theory Assignments Lab Assignments Project	Python Intermediate SQL DBMS HTML/CSS JavaScript	Moderate	Easy	Watch lectures at 1.5x, understand concepts, AQ, PA, GA & PYQs are enough for theory and use notes. For coding, Practice and try to create project after completing each week (except Lab Assignment).	15 - 20	Flask HTML/CSS JavaScript	Practice, Create Projects, Participate in Hackathons and Learn new technologies	Do Lab Assignments, watch tutorials, and create small projects. Take Project with Theory course, try to make a basic version in 1st term, then in 2nd term complete the project (Project is valid for 2 terms).
	Modern Application Development II	Theory Assignments Lab Assignments Project	Python Intermediate SQL DBMS MAD 1 HTML/CSS JavaScript	Tough	Moderate	Watch lectures at 1.5x, understand concepts, AQ, PA, GA & PYQs are enough for theory and use notes. For coding, Practice and try to create project after completing each week. Learn how to implement relevant theoretical concepts.	10 - 15	JavaScript Vue.js	Practice, Create Projects, Participate in Hackathons and Learn new technologies, Learn Deployment	Do Lab Assignments, watch tutorials, and create small projects. Learn and implement concepts covered in theory. Take Project with Theory course, try to make a basic version in 1st term, then in 2nd term complete the project (Project is valid for 2 terms).
	Programming Concepts using Java	Theory Assignments Coding Assignments OPPE	Any Programming Language Python	Moderate	Easy	Watch lectures at 1.25x, understand the concepts, Implement from Scratch and Practice.	15 - 20	OOP Programming Concepts	Practice, Create Projects and Participate in Coding Competitions	OPPE is really easy, but practice more on Hackerrank & Leetcode.
	System Commands	Theory Assignments Coding Assignments NPPE OPPE	Basics of Terminal/CMD	Tough	Moderate	Watch lectures at 1.25x, understand the concepts, Practice, Practice and Practice. Create some automation scripts use AI chatbots.	15 - 20	Bash script Overview of Unix	Practice, Create Scripts, Use in projects	Do atleast 50% NPPE to pass in OPPE, the more you practice, the more knowledge and understanding you get. This is the most interesting subject throughout Diploma in Programming

Diploma in Data Science

Tr	Course Name	Course Components	Pre-requisites	Difficulty Level (Newbie)	Difficulty Level (Foundation & Data Science Experienced)	What you've to do?	Hours per week	Outcomes	What After this?	My Advice
	Machine Learning Foundations	Theory Assignments	Maths 2 Stats 2	Moderate	Easy	Watch lectures at 1.25x, solve AQ, PA and GA, use notes and AI Chatbots.	10 - 15	ML Foundations	Learn ML Algorithms, implement them from scratch.	Revise Maths 2 and Stats 2. Linear Algebra is base.
	Business Data Management	Theory Assignments	Excel	Moderate	Easy	Watch lectures at 1.5x, understand the concepts, Practice in Excel.	5 - 10	Data Analysis	Do case study on various industries. Analyze the data, do BDM project.	Take Project with Theory course, try to make a basic version in 1st term, then in 2nd term complete the project (Project is valid for 2 terms).
	Machine Learning Techniques	Theory Assignments Coding Assignments	Maths 2 Stats 2 Python MLF	Tough	Moderate	Watch lectures at 1.5x, understand concepts, AQ, PA, GA & PYQs are enough for theory and use notes. Must do Programming Assignments on your own and Implement Algorithms from Scratch.	15 - 20	ML Foundations ML Algorithms ML Coding	Create ML Projects and participate in Kaggle competitions.	Do Lab Assignments, watch tutorials, and create small projects.
	Machine Learning Practices	Theory Assignments Project Coding Assignments OPPE	MLF MLT Python	Moderate	Easy	Watch lectures at 1.5x, understand concepts, AQ & PYQs are enough for theory. For coding, do PA and GA on your own.	10 - 15	ML Algorithms Complete ML Workflow ML Coding	Create ML Projects, participate in Kaggle competitions. Dive into Deep learning, explore various fields like Computer Vision, NLP & do Deep Learning specialization.	Do Lab Assignments, watch tutorials, and create small projects. Learn and implement concepts covered in theory. Take Project with Theory course, try to make a basic version in 1st term, then in 2nd term complete the project (Project is valid for 2 terms).
	Tools in Data Science	Theory Assignments ROE	MLF Python	Moderate	Easy	Watch lectures at 1.25x, understand the concepts. For ROE, you need practice, its a timed assignment, solve maximum questions possible in given time frame. PYQs are good to practice.	10-15	Tools & Techniques in Data ...	Must implement the concepts taught in lectures. Code it, debug it and explore it more.	-
	Business Analytics	Theory Assignments Coding Assignments	BDM	Moderate	Moderate	Watch lectures at 1.25x, understand concepts and practice the formulae. Do as much as practice possible. PYQs are good to practice.	10-15	Statistical Techniques Data centric Business Models	Do case study on various businesses. Analyze the data, apply your learnings.	-

Single Diploma - Diploma in Programming (DP)

Term 1	Term 2
DBMS	Java
PDSA	SC
MAD 1 Theory	MAD 2 Theory
MAD 1 Project	MAD 2 Project
	<i>MAD 1 Project (cont.)</i>

Term 1	Term 2	Term 3
DBMS	PDSA	Java
MAD 1 Theory	MAD 2 Theory	SC
MAD 1 Project	MAD 2 Project	<i>MAD 2 Project (cont.)</i>
	<i>MAD 1 Project (cont.)</i>	

Term 1	Term 2	Term 3	Term 4
DBMS	PDSA	SC	Java
MAD 1 Theory	MAD 2 Theory	MAD 2 Project	<i>MAD 2 Project (cont.)</i>
	MAD 1 Project	<i>MAD 1 Project (cont.)</i>	

Single Diploma - Data Science (DS)

Term 1	Term 2
MLF	MLP
MLT	BA
BDM	TDS
BDM Project	MLP Project
	<i>BDM Project (cont.)</i>

Term 1	Term 2	Term 3
MLF	BDM	BA
MLT	MLP	TDS
	BDM Project	<i>BDM Project (cont.)</i>
	MLP Project	<i>MLP Project (cont.)</i>

Term 1	Term 2	Term 3	Term 4
MLF	MLT	MLP	BA
BDM	BDM Project	TDS	<i>MLP Project (cont.)</i>
		MLP Project	
		<i>BDM Project (cont.)</i>	

Mixed Diploma - DP first then DS

Term 1	Term 2	Term 3	Term 4 (opt)
DBMS	SC	SC	TDS (optional)
PDSA	MAD 2 Theory	MLP	<i>BDM Project (cont.)</i>
MAD 1 Theory	MLT	BA	<i>MLP Project (cont.)</i>
MLF	BDM	TDS	
MAD 1 Project	MAD 2 Project	BDM Project	
	<i>MAD 1 Project (cont.)</i>	MLP Project	
		<i>MAD 2 Project (cont.)</i>	

Term 1	Term 2	Term 3	Term 4	Term 5
DBMS	SC	MLF	BDM	BA
MAD 1 Theory	PDSA	MLT	MLP	TDS
MAD 1 Project	MAD 2 Theory	Java	BDM Project	<i>BDM Project (cont.)</i>
	MAD 2 Project	<i>MAD 2 Project (cont.)</i>	MLP Project	<i>MLP Project (cont.)</i>
	<i>MAD 1 Project (cont.)</i>			

Term 1	Term 2	Term 3	Term 4
DBMS	SC	Java	BA
PDSA	MAD 2 Theory	MLT	MLP
MAD 1 Theory	MLF	BDM	TDS
MAD 1 Project	MAD 2 Project	BDM Project	MLP Project
	<i>MAD 1 Project (cont.)</i>	<i>MAD 2 Project (cont.)</i>	<i>BDM Project (cont.)</i>

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
DBMS	PDSA	Java	SC	BA	TDS
MAD 1 Theory	MAD 2 Theory	MLF	MLT	MLP	<i>MLP Project (cont.)</i>
MAD 1 Project	MAD 2 Project	BDM	BDM Project	MLP Project	
	<i>MAD 1 Project (cont.)</i>	<i>MAD 2 Project (cont.)</i>		<i>BDM Project (cont.)</i>	

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	Term 7
DBMS	PDSA	MAD 2 Theory	SC	MLT	MLP	BA
MAD 1 Theory	Java	MAD 2 Project	MLF	BDM	MLP Project	TDS
MAD 1 Project	<i>MAD 1 Project (cont.)</i>		<i>MAD 2 Project (cont.)</i>	BDM Project	<i>BDM Project (cont.)</i>	<i>MLP Project (cont.)</i>

Mixed Diploma - DS first then DP

Term 1	Term 2	Term 3	Term 4 (opt)
MLF	MLP	BA	Java (optional)
MLT	BDM	TDS	MAD 2 Project (cont.)
DBMS	SC	Java	
MAD 1 Theory	MAD 2 Theory	PDSA	
MAD 1 Project	BDM Project	MAD 2 Project	
	MLP Project	BDM Project (cont.)	
	MAD 1 Project (cont.)	MLP Project (cont.)	

Term 1	Term 2	Term 3	Term 4	Term 5
MLF	MLP	BA	SC	Java
MLT	BDM	TDS	MAD 2 Theory	PDSA
DBMS	MAD 1 Theory	MAD 1 Project	MAD 2 Project	MAD 2 Project (cont.)
	BDM Project	MLP Project	MLP Project (cont.)	
		BDM Project (cont.)	MAD 1 Project (cont.)	

Term 1	Term 2	Term 3	Term 4
MLF	MLP	BA	SC
MLT	DBMS	TDS	Java
BDM	MAD 1 Theory	MAD 2 Theory	PDSA
BDM Project	MAD 1 Project	MLP Project	MAD 2 Project
	BDM Project (cont.)	MAD 1 Project (cont.)	MLP Project (cont.)

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
MLF	MLP	DBMS	BA	SC	Java
MLT	BDM	TDS	MAD 1 Theory	MAD 2 Theory	PDSA
	BDM Project	MLP Project	MAD 1 Project	MAD 2 Project	MAD 2 Project (cont.)
		BDM Project (cont.)	MLP Project (cont.)	MAD 1 Project (cont.)	

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	Term 7
MLF	MLT	MLP	TDS	PDSA	SC	Java
BDM	BA	MLP Project	DBMS	MAD 1 Theory	MAD 2 Theory	MAD 2 Project (cont.)
BDM Project	BDM Project (cont.)		MLP Project (cont.)	MAD 1 Project	MAD 2 Project	

Mixed Diploma - DP & DS

Term 1	Term 2	Term 3	Term 4 (opt)
DBMS	SC	MLP	Java (optional)
PDSA	MLT	BA	<i>MLP Project (cont.)</i>
MLF	BDM	TDS	
MAD 1 Theory	MAD 2 Theory	Java	
MAD 1 Project	BDM Project	MLP Project	
	MAD 2 Project	<i>BDM Project (cont.)</i>	
	<i>MAD 1 Project (cont.)</i>	<i>MAD 2 Project (cont.)</i>	

Term 1	Term 2	Term 3	Term 4
DBMS	SC	MLP	Java
PDSA	MLT	BA	TDS
MLF	BDM	MAD 2 Theory	<i>MLP Project (cont.)</i>
MAD 1 Theory	BDM Project	MLP Project	<i>MAD 2 Project (cont.)</i>
MAD 1 Project	<i>MAD 1 Project (cont.)</i>	MAD 2 Project	
		<i>BDM Project (cont.)</i>	

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
DBMS	PDSA	MLT	Java	SC	BA
MAD 1 Theory	MLF	MAD 2 Theory	MLP	BDM	TDS
MAD 1 Project	<i>MAD 1 Project (cont.)</i>	MAD 2 Project	MLP Project	BDM Project	<i>BDM Project (cont.)</i>
			<i>MAD 2 Project (cont.)</i>	<i>MLP Project (cont.)</i>	

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
DBMS	PDSA	MLT	MLP	SC	BDM
MAD 1 Theory	MLF	MAD 2 Theory	MLP Project	TDS	BDM Project
MAD 1 Project	<i>MAD 1 Project (cont.)</i>	MAD 2 Project	<i>MAD 2 Project (cont.)</i>	<i>MLP Project (cont.)</i>	