

Note: Officials has to opt any 4 courses out of 10 mandatory Courses

List Of Beginner level Mandatory Courses Under TDP (Mandatory Upto Scientist-F)

S. No.	Course Name	Lessons	Duration (min.)
1	Data Analytics (Data Analytics Beginner)	Automation and Machine Learning Data Reduction & Exploratory Data Analysis Predictive Analytics & Big Data Storytelling with Data: Introduction Text Mining & Social Network Analysis.	291
2	Data Science (Data Science Beginner)	Data Science Overview Data Insights, Anomalies, & Verification: Handling Anomalies Data Silos, Lakes, & Streams: Introduction Harnessing Data Volume & Velocity: Big Data to Smart Data Balancing the Four Vs of Data: The Four Vs of Data.	270
3	Microservices (Exploring Microservices Beginner)	Microservices Architecture Microservices Containers Microservices Deployment and Continuous Integration Microservices Testing Strategies, Scaling, Monitoring, and Security. Basic Concepts of a Microservices Architecture	500
4	API Design (API Design Beginner)	Web API Essentials REST API: Exploring the Basic Features	243
5	DevOps (DevOps Beginner)	DevOps Methodologies and Development DevOps Management and Capabilities The Language of DevOps: DevOps Principles & Practices The Language of DevOps: DevOps Tools & Processes DevOps Mindset: DevOps Principles & Implementation Approach	366
6	Blockchain (Blockchain Beginner)	Introduction to Digital Currency The Basics of Blockchain Exploring Blockchain Blockchain and Your Business Bitcoin Technology Fundamentals	274
7	Networking (Network Technologies Beginner 2021)	TCP/IP Model TCP and UDP ports OSI Model DHCP Configuration VLAN Configuration InterVLAN Routing	393
8	Cyber & App Security (Cyber Security Beginner 2021)	Attack Vectors and Mitigations Vulnerabilities and Exploits Cryptography: Introduction to Cryptography Services Cryptography: Introduction to PKI Cryptography Fundamentals: Defining Cryptography Cryptography Fundamentals: Applying Cryptography OWASP Overview Introduction to OWASP and the Top 10 OWASP Top 10: List Item Overview CSSLP: Secure Software Implementation and Coding	762
9	Cloud & Infrastructure (Cloud & Infrastructure Beginner)	Cloud Computing Fundamentals: Overview Cloud Computing for the Business User: Concepts and Moving to the Cloud Cloud Computing Fundamentals: Storing and Managing Cloud Data Cloud Computing Fundamentals: Migrating to the Cloud Cloud Computing Fundamentals: Identity, Presence, and Privacy Cloud Computing Fundamentals: Cloud Security Using Docker: Benefits and Installation Using Docker: Dockerizing Applications Using Docker: Customizing and Clustering. Cloud Computing Fundamentals: Cloud Virtualization & Data Centers VMware Data Center Virtualization Overview.	1301
10	AI and ML (AI and ML Beginner 2021)	Data Engineering Fundamentals. UI/UX for Chatbot and Voice Interface AI. Machine Learning, Propensity Score, & Segmentation Modeling Introduction to Artificial Intelligence Introducing Natural Language Processing Machine Learning Data Classification and Machine Learning Tensor Flow: Introduction to Machine Learning Planning AI Implementation	520