

Data Analytics Internship Program Syllabus (120 Hours)

@ Odisha Computer Application Centre (OCAC) Study Center, Bhubaneswar

Duration: 1–2 Months

Total Hours: 120 (Theory + Practical + Projects)

Internship Fee: ₹7000

Module 1: Introduction to Data Analytics & Tools

Duration: 5 Hours

Topics:

- - What is Data Analytics?
- - Life Cycle of Data Analytics
- - Data Types, Sources & Formats
- - Tools Overview: Excel, Python, SQL, Tableau, Power BI

Module 2: Data Analytics Using Excel

Duration: 20 Hours

Topics:

- - Excel Basics: Formulas, Functions, Conditional Formatting
- - Lookup Functions (VLOOKUP, HLOOKUP, XLOOKUP)
- - Data Cleaning Techniques
- - Pivot Tables & Charts
- - Dashboards in Excel

Mini Projects:

- - Sales Dashboard
- - HR Attrition Analysis

Module 3: Python for Data Analysis

Duration: 35 Hours

Topics:

- - Python Basics: Variables, Data Types, Loops, Functions
- - NumPy for Numerical Computation
- - Pandas for Data Manipulation
- - Data Cleaning and Preprocessing
- - Exploratory Data Analysis (EDA) with Pandas and Matplotlib
- - Data Visualization: Matplotlib & Seaborn

Mini Projects:

- - Analysis of COVID-19 Dataset
- - Movie Ratings Analytics

Module 4: SQL for Data Analytics

Duration: 20 Hours

Topics:

- - Introduction to Databases & RDBMS
- - SELECT, WHERE, ORDER BY
- - Joins: INNER, LEFT, RIGHT, FULL
- - Aggregations: GROUP BY, HAVING
- - Subqueries & CTEs
- - Creating Views

Mini Projects:

- - Employee & Sales Data Analysis
- - Product Inventory Queries

Module 5: Data Visualization with Power BI & Tableau

Duration: 20 Hours

Topics:

- - Connecting to Excel/SQL data
- - Data Modeling
- - Creating Interactive Dashboards
- - Charts, Filters, Slicers, Maps
- - Publishing Reports on Power BI Service / Tableau Public

Mini Projects:

- - Financial Dashboard
- - Customer Segmentation Report

Module 6: Capstone Project

Duration: 20 Hours

Topics:

- - Customer Purchase Analysis
- - Retail Sales Dashboard
- - Student Performance Report
- - Marketing Campaign Effectiveness

Mini Projects:

- - Deliverables: Code files (Excel/Python/SQL), Dashboard (Power BI/Tableau), Final Presentation & Report

Assessment & Certification

- - Regular Assignments
- - Weekly Quizzes
- - Capstone Project Evaluation
- - Certificate of Completion & Internship Letter

Additional Benefits

- - Access to learning materials & datasets
- - Resume-building and LinkedIn optimization tips
- - Guidance for career path in Data Analytics