

Data Analyst (Spring 2023)

Instructor:

Carolina Softech
Timothy Stephen

Class Delivery:

Hybrid –
Participants must
attend in person
AND online dates.

Start and End Date:

March 6 – June 8, 2023

Mondays & Thursdays
In person 6:30-8:30pm

Tuesdays
Online 6:30-9pm

Course Duration:

14 Weeks

Course Overview

Data Analysis is a process of inspecting, cleaning, transforming, and modeling data to discover useful information and support decision making to achieve business goals. There are various data analysis qualitative and quantitative methods, and analytical or statistical tools used to extract useful information and translate them into insights to make better business decisions, most of which are covered in this program.

Pre-requisites

This course requires strong interpersonal skills, such as good communication skills, flexibility, and adaptability. Critical thinking skills and an advanced understanding of Microsoft Excel 2013 or higher is also required.

Professionalism is very important in this field, and therefore in this course. Class attendance, punctuality, civility, ability to get along with others, cooperation, collaboration, creativity, attention to details, resourcefulness, and meeting deadlines are all critical elements of success.

Course Summary**Course 1- Introduction to Data Analytics**

The Data Analytics for Beginners' course will give you insights into how to apply data and analytics principles in your business. Learning analytics, data visualization, and data science methodologies through this course will make you capable of driving better business decisions and ROI.

Course 2- Data Analytics with Excel

This course includes Microsoft® Excel skills, and also includes training on Power BI. These are two commonly used tools.

Course 3- Programming Basics and Data Analytics with Python

Learn how to perform data analytics with Python using multi-dimensional arrays in NumPy, manipulate Data Frames in pandas. This Data Analytics course will take you from the basics of Python to exploring many different types of data. You will learn how to prepare data for analysis, perform simple statistical analyses, create meaningful data visualizations, predict future trends from data, and more.

Course 4 - Power BI

Power BI is a data visualization, reporting, and business intelligence tool used world-wide. This course trains you to use the tool effectively for preparing data, creating interactive dashboards, adding different dimensions, and drilling into outliers.

Course 5

Introduction to SQL
Working with Queries (DDL, DML, DQL)
Aggregate Functions

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Joins and Set Operations
 Implementation of Data Integrity
 Working with Constraints
 Implementing Views
 Working with Indexes
 Working with Stored Procedures and Functions

Projects

Web Scraping Projects to Extract Data from Websites
 Exploratory Data Analysis Projects
 Data Visualization Project

Languages	SQL
Languages	Python
Tools	Power BI, Excel
Concepts	Data reprocessing
Concepts	Data Modeling
Concepts	Data sets
Concepts	Statistics - Basics
Concepts	Deployment
Concepts	BA Concepts

Course Outcomes

- The course provides the complete preparation you need to become a data analyst
- Acquire a big picture understanding of the data analyst role
- Learn beginner skills of Python
- NumPy and pandas basics
- Be able to work with text files
- Understand different data types and their memory usage
- Learn Data Visualization
- Engage with coding exercises

Course Schedule		
<u>Week</u>	<u>Days</u>	<u>Time / In person / online</u>
Week 1 – 14	Monday / Thursday	In person - 6:30 – 8:30 pm
Week 1 - 14	Tuesday	Online - 6:30 – 9:00 pm
Workshops		
Note: Dates on Workshops are estimated and are subject to change.		
<u>Week</u>	<u>Subject</u>	
Week 7 Saturday (8:30 am – 1 pm (4.5 hrs)	Agile Workshop (In Person)	
Week 4 Wednesday (2 hrs)	SDLC Workshop (Online)	
Week 5 or 6 Tuesday (2 hrs)	Project Initiation (Online)	

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Required Material

Chrome Books and Mac Books do not meet the standard technology requirements needed for these courses.

This course requires a Windows-based computer and a working internet connection. We will be using various software programs throughout this course. Most of the downloads are for Windows-based machines only and will NOT work with Apple/MAC systems, Chrome books or tablets.

- 250 GB hard drive or higher
- 4 GB RAM or higher
- 2.0 GHz Intel or AMD processor
- Windows 10
- Microsoft Excel access (Desktop or Microsoft 365)
- Internet Explorer or Safari 11 or later
- Anti-virus program (updated regularly)
- Computer microphone and speakers to participate during class
- Web camera to be visible during class
- High-speed Wi-Fi connection obtained either at home or in a quiet study setting

Course Instructor

Timothy Stephen is an IT professional with over 15 years of experience. He has held roles in software testing, next gen technologies, adoption of digital technologies throughout retail, banking, oil and natural gas, and healthcare industries. He is currently an Associate Director for an IT services company.

Timothy is married and has three daughters. In his spare time, he enjoys playing and composing music. He has a heart for community and loves people.

Additional Information

This is an interactive course. Students will learn from the instructor and guest lecturers, hands-on activities, individual and group assignments, presentations, etc.

**This syllabus is a highlight of the course details and is subject to change.*