Data Analytics (Fall 2024)

Instructor
Carolina Softech
Timothy Stephen

Class Delivery
Hybrid – Participants must attend in person AND online dates.

Program Dates
August 12 – November 21, 2024

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

Tuesdays & Wednesdays
Online 6:30 – 9 pm

Program Duration
15 Weeks

PROGRAM OVERVIEW

Data Analytics is the process of inspecting, cleaning, transforming, and modeling data to discover useful information and support decision making to achieve business goals.

There are various qualitative and quantitative data analysis methods, as well as 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

Professionalism is particularly important in this field, and therefore in this program. Class attendance, punctuality, civility, ability to have a good relationship with others, cooperation, collaboration, creativity, attention to details, resourcefulness, and meeting deadlines are all critical elements of success.

To apply to Goodwill's Data Analytics Training Program, you must have:
- 1 year of Information Technology work experience or education
- Strong interpersonal skills, such as effective communication skills, flexibility, and adaptability.
- Advanced level knowledge of Microsoft Excel
- Critical thinking / analytical reasoning skills

PROGRAM SUMMARY

Week 1: Program Orientation

Week 1 is spent getting acclimated to GoodwillSP Program Expectations. The **Goodwill University Team** gives an overview of the program and discusses student and staff expectations and holds an interactive workshop on customer service and essential skills. **The Career Navigation Team** discusses career coaching and employability skills that you will build on throughout the program. The **Employer Engagement Team** discusses expectations related to job preparation and search activities.

There are additional assignments, projects and activities via Goodwill University, Career Navigation, and the Employer Engagement Teams throughout the program, including but are not limited to:

- Portfolio Development
- Critical Thinking Coursework
- Elevator Pitch Creation
- Resume Development

Data Analytics (Fall 2024)

- Interview Preparation
- Career Development Planning
- Individual and Group Presentations
- Employer Showcase Event

Module 1 - Introduction to Data Analytics

Data Analytics for beginners' program 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 program will make you capable of driving better business decisions and ROI (return on investment).

Module 2 - Data Analytics with Excel

The program includes Microsoft® Excel skills and includes training on Power BI. These two commonly used tools.

Module 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 program 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.

Module 4 - Power BI

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

Module 5

- Introduction to SQL
- Working with Queries (DDL, DML, DQL)
- Aggregate Functions
- Joins and Set Operations
- Implementation of Data integrity
- Working with Constraints
- Implementing Views
- Working with Indexes
- Working with Stored Procedures and Functions

Data Analytics (Fall 2024)

Technical 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

PROGRAM OUTCOME

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

PROGRAM SCHEDULE		
WEEK	**DAYS**	**FORMAT**
Week 1 – 15	Mondays & Thursdays	In person 6:30 - 8:30 pm
Week 1 – 15	Tuesdays & Wednesdays	Online 6:30 – 9 pm
WORKSHOP		
Note: Dates on workshops are to be determined during the program.		
WEEK	**SUBJECT**	
Saturday Workshop during weeks 7 or 8 (8:30 am – 1 pm)	TBD	
A detailed lesson plan will be provided to those selected for the program. Details listed here are subject to change.		

Data Analytics (Fall 2024)

REQUIRED MATERIAL

This program requires a **Windows-based laptop computer** and a working internet connection. We will be using various software programs throughout this program.

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

PROGRAM INSTRUCTOR

Timothy Stephen is an IT (Information Technology) 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 & 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 program. Students will learn from instructor and guest lecturers, hands on activities, individual and group assignments, presentations, etc.

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