

TRANSITIONING FROM MS EXCEL TO POWER BI FOR DATA ANALYTICS

SEMESTER: FALL 2026 (August - December)

COURSE CODE: LH-E-810-E

INSTRUCTOR: Sriroop Chaudhuri

INTRODUCTION

Currently, the global job market is going through a rapid transformation, marked by growing focus on data technology, data engineering, data analytics, and information management. As we have moved towards more data-driven approaches for work, the need of efficient analysis and visualization of complex information has also skyrocketed. Newer tools and applications, such as machine learning and deep learning algorithms, are emerging every day. And so is the demand of newer workforces trained in innovative tools and techniques in data analysis.

In this regard, Power BI Desktop offers a great opportunity to immerse with the newer techniques of data analytics. This is an open-sourced tool from Microsoft that brings together all the functionalities of MS Excel and adds a lot more. Even though largely conceived and developed business and finance, the features and functionalities of Power BI, just like MS Excel, apply just the same to any sphere of work. Most of the data science degrees/diplomas/certification programs currently being offered around the world, include at least some modules of Power BI.

This course begins with a series of hands-on exercises with MS Excel, followed by the demonstrations of the core functionalities of Power BI Desktop.

CORE COURSE MODULES (TENTATIVE):

- *Scenario Analysis and Goal Seeking* with What-If and SOLVER in MS Excel
- MS Excel Power Query for Data Cleaning
- MS Excel Pivot Table Applications
- Intro to Power BI Desktop
- Creating a Power BI Data Model
- Performing Calculations with DAX
- Data Visualization with Power BI
- Building Dynamic Reports
- Interactive Dashboard Creation
- Intro to Power BI Optimization

PREREQUISITE

- Working knowledge of MS Excel
- No prior coding experience required
- Willingness to learn about data and data science
- Willingness to adopt to new technologies

MODE OF INSTRUCTION

- 100% hands-on, in-class exercises using MS Excel and Power BI Desktop
- No Textbook necessary

MODE OF ASSESSMENT

Continuous

COURSE GRADING RUBRIC

- 3-4 in-class assignments (15-20 points each)
- 1 final in-class assignment (30 points)

WHY TAKE THIS COURSE...?

In the field of data analysis, MS Excel, by and large, has been the tool of choice so far. But Power BI comes as the next level of MS Excel, with specially customized tools for big data analytics and visualization. It is not like that the need for MS Excel has totally dropped. That need will always be there. That is why, this course introduces a few of the advanced MS Excel operations.

But as the global job market forces change, and which is happening already and will continue to happen through the coming years, the employers are looking for newer possibilities to streamline and automate data analysis routines, with more advanced tools and technologies. And which is why the job seekers in the field of data analytics have to take their skill sets to the next level, beyond MS Excel, which is Power BI. With minimal lecturing and multiple hand-on exercises, this course will offer a broad, bird's eye view of the various functions of Power BI, to help you build your data analytics portfolio for future.