DATA ANALYTICS WITH EXCEL AND TABLEAU PROGRAM

An 11-week program covering advanced Microsoft Excel® and Tableau® for statistical modeling, data analytics, and VBA programming

In our data-centric world, professionals who have the skills to use advanced analytics to help solve business problems and inform decision-making will position themselves ahead of others. DePaul’s Data Analytics with Excel and Tableau Program will teach you to prepare data for analysis, use various data analysis techniques, and present data in a visually-compelling way using two of the most popular tools for business intelligence and data analytics. The first part of the program will cover an introduction to regression, analysis of variance, and probability theory using tools available in Excel as well as coverage of VBA programming and how it can help with data analytics. The second part of the program will cover working with data and understanding visualizations in Tableau as well as some advanced analytics and integration with other tools. Mathematical and statistical concepts will be covered in a straightforward and practical manner. The program is designed for information technology and business professionals who have basic skills in Excel. No prior Tableau or programming experience is needed.

Program content includes lectures, demos, and hands-on exercises. Students are required to bring a laptop with current versions of Microsoft Excel and Tableau to every class. Students will be instructed to download a copy of the software for educational use, but they must have full administrator rights to their laptop in order to install software.

YOU WILL BE ABLE TO:

- Learn the fundamentals and proceed to advanced topics in VBA (Visual Basic for Applications)
- Learn the foundations of data analysis like regression analysis and analysis of variance using Excel
- Comprehend the foundations of probability theory
- Learn the essentials of Tableau concepts
- Explore how to work with data in Tableau
- Learn core visualizations in Tableau and how to use Tableau for presentations
- Gain competency in some advanced analytics using Tableau
# DATA ANALYTICS WITH EXCEL AND TABLEAU PROGRAM

## CURRICULUM

### VBA AND MACROS
The Excel Object Model, Objects and Methods, Variables and Data Types, Ranges, Looping and Flow Control, R1C1 Style, Event Programming, Arrays, Creating Classes and Collections, and Data Mining with advanced filters.

### REGRESSION ANALYSIS USING EXCEL
Using correlations to summarize relationships. Introduction to multiple regression. Incorporating qualitative factors into multiple regression. Modeling nonlinearities and interactions.

### ANALYSIS OF VARIANCE WITH EXCEL

### INTRODUCTION TO PROBABILITY WITH EXCEL

### INTRODUCTION TO TABLEAU
Review of the basic and essential Tableau concepts to get you started. Getting your data ready. Tableau Prep.

### WORKING WITH DATA IN TABLEAU
Joins, blends, and data structures. Data densification, cubes, and Big Data. Table calculations. Introduction to the dashboard. Introduction to widely-used bar charts.

### MAPPING WITH TABLEAU
Covering all aspects of Tableau mapping. Extending Tableau mapping with other technologies.

### TABLEAU FOR PRESENTATIONS
How to use Tableau for presentations. Visualization best practices and dashboard design.

### ADVANCED ANALYTICS WITH TABLEAU
Improving performance. Self-Service Analytics. Time series analysis.

### PROGRAMMING TOOL INTEGRATION
Integration with other tools.

## GENERAL INFORMATION

### ADMISSION
Applicants should have basic Excel skills. No prior experience with Tableau or programming is expected. Basic experience with a personal computer running Windows is assumed.
FACILITIES

To promote the learning process, the Institute maintains special-purpose laboratories as well as dedicated classrooms equipped with state-of-the-art audio/visual equipment.

In addition, the college’s unique Course OnLine (COL) technology allows students to replay classes over the Internet. COL captures and replays several components of the classroom experience—audio, video, PC screen, and whiteboard—and incorporates them into one interface to provide an innovative rebroadcast system.

SCHEDULE

The Institute offers the program each quarter. Classes meet one evening per week. The option to take the program entirely online is also available.

FACULTY

The faculty consists of a team of instructors from the College of Computing and Digital Media and experts from industry. Faculty will be available throughout the program both in person and through electronic mail.
The college, through its School of Cinematic Arts, School of Computing, and its School of Design, offers a variety of programs at the undergraduate and graduate levels. Over 3,000 students are enrolled in the college’s bachelor’s programs and about 2,000 students are enrolled in the master’s and Ph.D. programs making the college’s graduate program one of the largest in the country. The college offers close to 500 courses each quarter, many in the evening, and primarily in the Loop and Lincoln Park campuses. Most of the degree programs are also available exclusively online.

**Offerings at the undergraduate level include:**
- Animation B.A. / B.F.A.
- Computing B.A.
- Computer Science B.S.
- Cyber-Physical Systems Engineering B.S.
- Cybersecurity B.S.
- Data Science B.S.
- Film and Television B.A. /B.F.A.
- Game Design B.S.
- Game Programming B.S.
- Graphic Design B.F.A.
- Information Systems B.S.
- Information Technology B.S.
- Math and Computer Science B.S.
- Network Engineering and Security B.S.
- User Experience Design B.S.

**Offerings at the graduate level include:**
- Animation M.A.
- Business Information Technology M.S.
- Computational Finance M.S.
- Computer Science M.S.
- Cybersecurity M.S.
- Data Science M.S.
- Digital Communication and Media Arts M.A.
- E-Commerce Technology M.S.
- Experience Design M.A.
- Film and Television M.S.
- Game Programming M.S.
- Health Informatics M.S.
- Human-Computer Interaction M.S.
- Information Systems M.S.
- Network Engineering and Security M.S.
- Product Innovation and Computing M.S.
- Software Engineering M.S.
- J.D./M.S. in Computer Science Technology

**Master’s of Fine Arts**
- Animation
- Creative Producing
- Documentary
- Film and Television Directing
- Game Design
- Screenwriting

**Ph.D. in Computer and Information Sciences**
- Ph.D. in Human Centered Design

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The Institute for Professional Development was formed by the college in 1984 to assist both individuals and businesses in keeping pace with the rapid development of computer technologies. The Institute currently offers a variety of intensive certificate programs in these areas:

- Advanced Python
- Advanced SQL
- Artificial Intelligence for Enterprise
- Automated Software Testing
- Big Data and NoSQL
- Big Data Using Hadoop
- Big Data Using Spark
- Cloud Computing Technologies
- Cybersecurity Risk Management
- Data Analytics with Excel and Tableau
- Data Science for Business
- Data Science: Programming with Python
- DevOps
- Fundamentals of Statistics and Machine Learning Using R
- Incident Response and Digital Forensics
- Introduction to SQL
- iOS Developer
- Machine Learning and Deep Learning
- Modern Information Technology
- Modern .NET Web Development
- SQL Server® Business Intelligence
- SQL Server® Database Administration
- Technology and Innovation
- Web Development with JavaScript and HTML5

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**APPLICATION PROCEDURE:**
Complete the enclosed application and return it with a non-refundable $40.00 application fee (check or money order made payable to DEPAUL UNIVERSITY) to:

DePaul University
Institute for Professional Development
243 S. Wabash Avenue, Room 301
Chicago, IL 60604-2300

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