SQL SERVER BUSINESS INTELLIGENCE PROGRAM

An eleven-week in-depth program covering Microsoft SQL Server® 2019 analysis services, integration services, and reporting services

DePaul University's SQL Server Business Intelligence Program is designed to provide a comprehensive introduction to the Microsoft Business Intelligence platform using SQL Server. The program focuses on teaching data professionals how to use SQL Server 2019 features and tools to build business intelligence solutions. These features include analysis services, integration services, data mining, reporting service and Power BI®. The tools to develop and manage the solutions are SQL Server Management Studio (SSMS) and Visual Studio 2019. This program provides students with the product knowledge and skills needed to support business users by using the current Microsoft SQL Server business intelligence platform.

Classroom lectures and demonstrations will be complemented by reading, assignments, and hands-on exercises. In addition, students will be provided with a copy of Microsoft SQL Server 2019 for installation on their personal computers. This computer must be running Windows® 10 and the student should have administrator privileges.

YOU WILL LEARN ABOUT:

- SQL Server Management Studio (SSMS)
- SQL Server Integration Services (SSIS) - Data Extraction, Transformation and Loading (ETL)
- SQL Server Analysis Services (SSAS)
- Unified Dimensional Modeling - cube and dimensions development
- Key Performance Indicators and calculations
- Developing and utilizing different data mining algorithms
- SQL Server Reporting Services (SSRS)
- Design reports using Report Builder
- Mobile Report
- Power BI
- Big Data in the Cloud
- Big Data Cluster
- Azure Data Factory
- Azure Data Warehouse, Data Lake Store, and Azure Data Lake Analytics
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Business Intelligence (BI) solutions provide the infrastructure that enables organizations to make better business decisions. In today’s business climate, those organizations that can collect, analyze and make timely decisions based on their data have a distinct competitive advantage over other organizations. Microsoft SQL Server Business Intelligence allows companies to gain greater insight from their business information and achieve faster results for a competitive advantage. SQL Server Business Intelligence includes Analysis Services, Integration Services, Data Mining, Reporting Services and Power BI.

Analysis Services provides a unified and integrated view of all your business data as the foundation for all of your traditional reporting, OLAP analysis, Key Performance Indicator (KPI) scorecards, and data mining. Analysis Services also provides tools for data mining with which you can identify rules and patterns in your data, so that you can determine why things happen and predict what will happen in the future – giving you powerful insight that will help your company make better business decisions. Integration Services is a modern data integration platform that can integrate data from any source. It provides a scalable and extensible platform that empowers development teams to build, manage, and deploy integration solutions to meet unique integration needs. Reporting Services is a comprehensive, server-based reporting solution designed to help you author, manage, and deliver both paper-based and interactive Web-based reports. Power BI transforms company's data into rich visuals for better decisions.

The SQL Server Business Intelligence Program is designed for business intelligence or data analysis professionals who wish to learn about BI techniques and solutions available with Microsoft SQL Server. Students in the program are expected to do a considerable amount of work outside of class.

CURRICULUM

The following topics are covered in the program. Each unit involves reading and assignments. All assignments can be done with the software provided.

YOUR LEARNING ENVIRONMENT

Program overview. Tools provided to students.

MICROSOFT BUSINESS INTELLIGENCE OVERVIEW


SQL SERVER INTEGRATION SERVICES (SSIS)

Extract Transform Load (ETL) fundamentals and SSIS overview. SSIS architecture and tools. Implementing control flow and data flow. Debugging and error handling. Deploying and managing packages.

SQL SERVER REPORTING SERVICES (SSRS)


SQL SERVER ANALYSIS SERVICES (SSAS)

Business Intelligence Development Studio. Dimensional modeling and Unified Dimensional Model (UDM). Measures and measure groups. Cube development and customization. Multidimensional OLAP (MOLAP), Relational OLAP (ROLAP), and Hybrid OLAP (HOLAP).

POWER BI

Power BI is a suite of business analytics tools to quickly analyze data and share insights in visually-compelling ways. Monitor your business and get answers quickly with rich dashboards available on every device.

DATA MINING

Data mining algorithms and models. Data mining application forecasting, training, and analyzing.

BIG DATA CLUSTER

SQL Server 2019 combines together the SQL Server database engine, Apache Spark and Hadoop Distributed File System (HDFS) into a unified data platform for scalable compute and storage to discover new insights thru accessing both structured and unstructured data.
GENERAL INFORMATION

ADMISSION

Applicants should have knowledge of data analysis concepts and tools, of relational database concepts, and of data modeling. In addition, applicants should have basic SQL Server skills. A substantial commitment of time is required for this intensive course of study. Final admission will be determined by the admissions committee on the basis of an applicant's overall qualifications, including work history and educational background.

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

SCHEDULE

The Institute offers a session in the fall, winter, and spring quarters. Classes meet one evening per week. The option to take the program strictly online is also available.

FACULTY

The program will be taught by a faculty member from the College of Computing and Digital Media and an expert 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. Almost 4,000 students are enrolled in the college’s bachelor’s programs and more than 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 more than 400 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.
- Industrial Design M.F.A.
- 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.
- 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

INSTITUTE FOR PROFESSIONAL DEVELOPMENT

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
- DevOps
- Data Analytics with Excel and Tableau
- Data Science for Business
- Data Science: Programming with Python
- Fundamentals of Statistics and Machine Learning Using R
- Fundamentals of R
- Incident Response and Digital Forensics
- Introduction to SQL
- Ios Developer
- Modern Information Technology
- Machine Learning and Deep Learning
- Modern .NET Web Development
- SQL Server® Business Intelligence
- SQL Server® Database Administration
- Technology and Innovation
- Web Development with JavaScript and HTML5

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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