



**KENTUCKY STATE
UNIVERSITY**

DATABASE ANALYTICS CERTIFICATE

The Database Analytics Certificate, offered by the School of Mathematics and Computer Science, requires the completion of 26 credit hours and is designed to equip students with advanced skills in data management, analysis, and interpretation essential for data-driven decision making. This comprehensive program combines theoretical knowledge with practical experience in database systems, data analytics, and business intelligence tools.

Students will study core topics such as database design and implementation, SQL programming, data warehousing, data mining, and statistical analysis. The curriculum also includes courses on big data technologies, data visualization, and machine learning fundamentals to prepare students for the evolving landscape of data analytics. Emphasis is placed on hands-on projects, enabling students to work with real-world datasets and develop actionable insights.

This certificate is ideal for students and professionals in fields such as computer science, business, economics, healthcare, and social sciences who seek to enhance their data skills for roles like data analyst, database administrator, or business intelligence specialist. Graduates will be proficient in managing complex databases, extracting meaningful patterns from large datasets, and communicating findings effectively to support organizational goals.

Whether you aim to deepen your expertise in data analytics or pivot to a career focused on data-driven solutions, the Database Analytics Certificate offers a rigorous and career-relevant path to mastering the tools and techniques that power today's information economy.

Students admitted to this certificate program must meet these prerequisites before enrolling in this coursework: Show proof you have successfully attained knowledge of any computer programming language OR successfully enroll in and pass COS 107 Problem Solving, Logic, and Design or equivalent course prior to enrollment in these courses.

All courses must be passed with a "C" or better. The Certificate requires the completion of:

Code	Title	Hours
COS 108	Prin Computer Science I	4
COS 109	Prin Computer Sci II	4
COS 200	Computer Information Systems	3
COS 310	Discrete Computing Structures	3
COS 340	Data Struc Algorithm Analy	3
COS 364	Data Storage and Data Mining	3
COS 410	Database Management Systems	3
COS 483	Database Security	3
Total Hours		26