COMPUTER SCIENCE, INFORMATION SECURITY & DATA SCIENCE

GRADUATE PROGRAMS

Utilize existing systems to create the technologies of tomorrow.

Conduct industry-relevant research that pushes fundamental theories into reality.

- Develop and implement efficient, scalable and secure software systems

- Design, execute and evaluate network-based distributed systems, components and

Degree Requirements
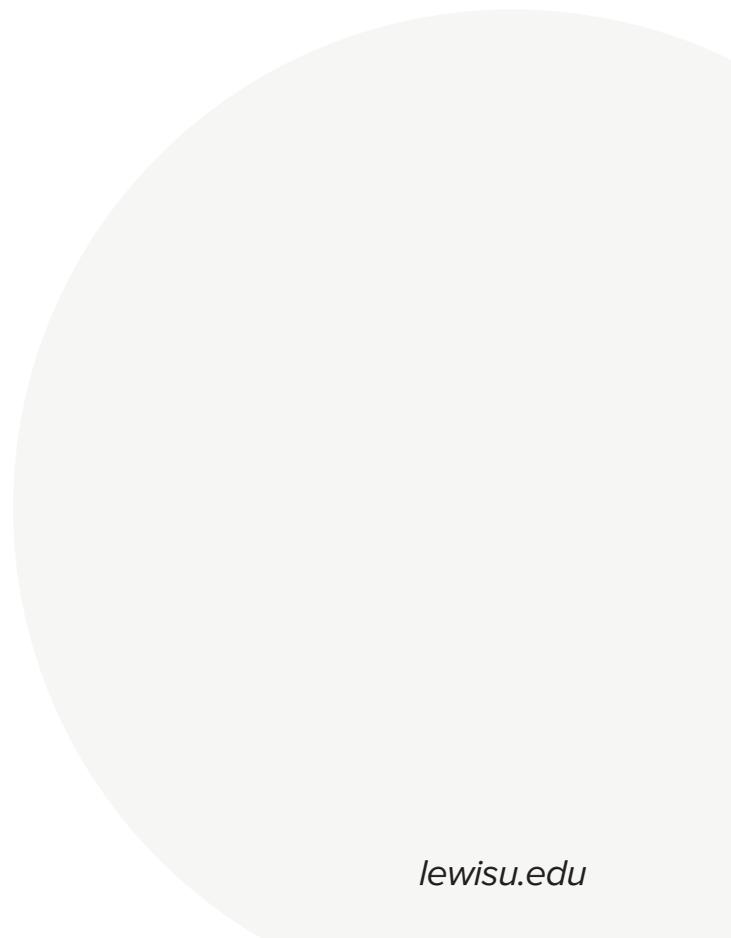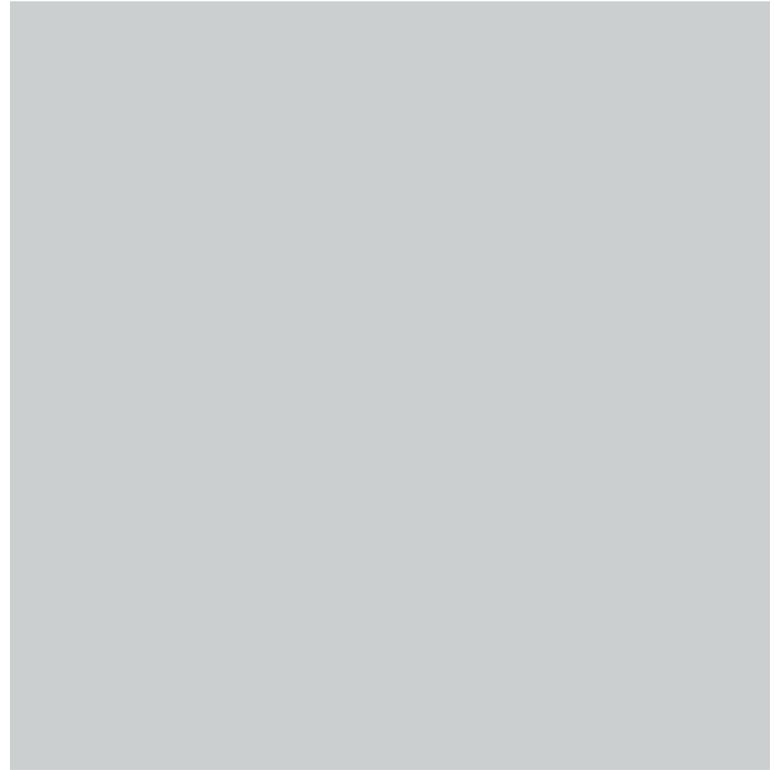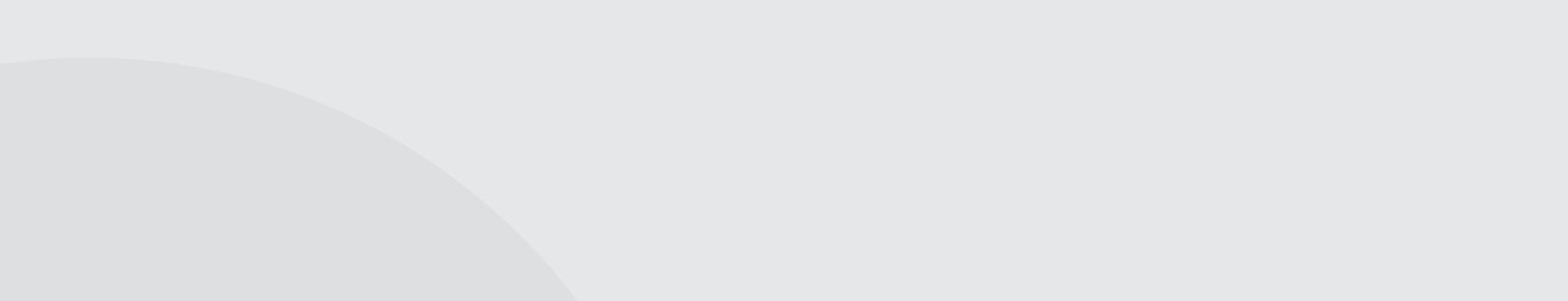
Learn how to mine the big secrets hiding in company data.

Help organizations transform decision making by using the vital information in data to improve processes, relationships and revenues.
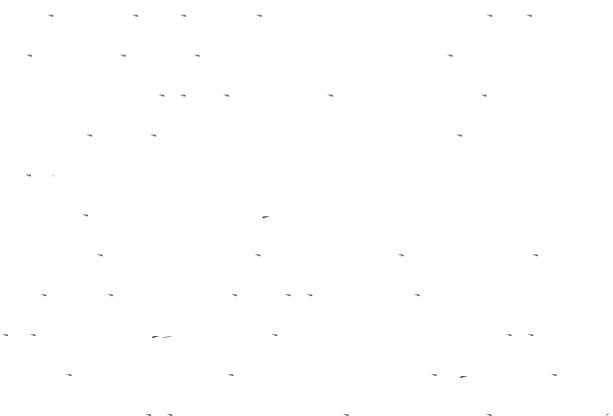
- Design and develop software and systems to store, manage, query, process and interpret big data
- Devise algorithms to identify trends
- Determine how to best display data to communicate actionable recommendations
- Develop an in-depth understanding of the mathematics and computing of data science techniques and technologies
- Use real-time and historical data to solve real-world problems
- Learn to evaluate and compare large-scale and cloud-based storage solutions that meet specific performance, security, query, functional and cost requirements
- Choose appropriate data analysis techniques to solve specific problems

Tyler Owen '14, Managing Consultant

"I travel a lot for work, so Lewis' online MSIS program worked well for me. Even though I attended class remotely, I was still able to attend the live lecture and interact with the instructor. I really enjoyed seeing the practical experience my professors brought to the classroom from working in the field. It's given me a more well-rounded knowledge of the industry, which has allowed me to talk to my customers in a more intelligent manner. And it's made me more confident in what I can do."

Admission Requirements

- A baccalaureate degree from an accredited institution of higher learning
- A minimum undergraduate GPA of 3.0 on a 4.0 scale*
- Undergraduate mathematics coursework in Calculus
- A completed application for graduate admission with $40 application fee
- A professional resumé
- Official transcripts from all educational institutions attended
- Two-page statement of purpose
- Two letters of recommendation
- International students are required to have a TOEFL test score greater than 550 (computer-based 213; Internet-based 79)

Provisional admission may be granted for those who do not meet these requirements

Degree Requirements

Degree Offered:
Master of Science in Data Science
Total Credit Hours Required: **36**

I. CORE COURSES (24)

MATH-51000	Mathematics for Data Scientists
MATH-51100	Concepts of Statistics I
CPSC-51000	Introduction to Data Mining and Analytics
CPSC-51100	Statistical Programming
CPSC-52500	Encryption and Authentication Systems
CPSC-53000	Data Visualization
CPSC-54000	Large-Scale Data Storage Systems
CPSC-55000	Machine Learning

II. CONCENTRATION COURSES (12)

Computational Biology and Bioinformatics (12)

BIOL-50900	Introduction to Computational Biology
BIOL-51000	Data Systems in the Life Sciences
BIOL-51200	Research in Biotechnology
BIOL-59000	Data Science Project for Life Scientists

Computer Science (12)

CPSC-59000	Data Science Project for Computer Scientists

Plus, choose three of the following:

MATH-51200	Concepts of Statistics II
CPSC-51700	Pervasive Application Development
CPSC-55200	Semantic Web
CPSC-55500	Distributed Computing Systems

Certificate in Computational Biology and Bioinformatics

Total Credit Hours Required: **18**

BIOL-50900	Introduction to Computational Biology
BIOL-51000	Data Systems in the Life Sciences
MATH-51000	Mathematics for Data Scientists
CPSC-51000	Introduction to Data Mining and Analytics
CPSC-51100	Statistical Programming
CPSC-53000	Data Visualization

Certificate in Data Science

Total Credit Hours Required: **18**

MATH-51000	Mathematics for Data Scientists
CPSC-51000	Introduction to Data Mining and Analytics
CPSC-51100	Statistical Programming
CPSC-53000	Data Visualization
CPSC-54000	Large-Scale Data Storage Systems
CPSC-55000	Machine Learning

L

Apply Today

Applying to Lewis University is simple:

- Complete the Graduate Application at *lewisu.edu/apply*.

- Submit the necessary transcripts or supporting documents for your program. Some programs have special admission requirements.

- Submit the $40 application fee online.

Why more graduate students choose Lewis

- Lewis' state-of-the-art Science Center houses some of the most impressive computing resources in the region

- Lewis offers cutting-edge cloud computing resources and software suites

- Lewis is a Department of Homeland Security (DHS)/National Security Agency (NSA) nationally recognized Center of Academic Excellence in Information Assurance Education

- Recently named #1 best private college value in Illinois by Great Value Colleges

- Small, interactive classes so you can grow with your peers led by dedicated faculty who are experts in their field with real-world experience

Let us talk with you about funding your education

- Submit your application for admission at *lewisu.edu/apply*.

- Complete the Free Application for Federal Student Aid (FAFSA) at *fafsa.ed.gov* and use 001707 for Lewis' school code.

- If your FAFSA application is selected for verification, Lewis will request additional documentation (IRS tax transcript, verification of child support, etc.). The IRS Data Retrieval process provides the easiest way to meet these requirements.

- Within two weeks upon acceptance to Lewis and completion of the FAFSA, notification of financial aid eligibility will be mailed to your address on file. Simply follow the steps outlined in the packet.

- If you're awarded financial aid, you must complete the Entrance Counseling and Direct Stafford Loan Promissory Note (MPN) upon

  in 8d3 32bcL Td 5