

MATH, COMPUTER SCIENCE, & DATA SCIENCE



$$\forall \epsilon > 0 \exists \delta > 0 (0 < |x - x_0| < \delta \Rightarrow |f(x) - g(x)| < \epsilon)$$
$$\text{dla } n \in \mathbb{N} x_n \in A \quad x_0$$
$$\lim_{n \rightarrow \infty} x_n = x_0,$$



Math, CS & DS Majors are in Demand

Math, CS & DS Degree Programs:

- B.A. or B.S. in Math
- B.A. or B.S. in Computer Science (CS)
- M.S. in Data Science (DS)

Many modern challenges are solved by math, computer science, and data science majors. The programs at TLU offer an innovative approach to these highly technical fields.

Combining technical disciplines that promote critical thinking and analytical problem-solving skills with a liberal arts and sciences foundation ensures students graduate with the communication, leadership, and innovation skills that technology companies are looking for in future employees.

A liberal arts and sciences education provides the broad yet deep experience that math, computer science, and data science graduates need to excel within an organization.



What is Computer Science (CS)?

Computer Science covers a variety of topics like designing and building software, developing effective solutions to computing problems, user interface design, mobile applications, and network security issues. Instruction includes Python, Java, C-applications, and network security issues. Instruction includes Python, Java, C-Programming, creative thinking, databases, operating systems, e-commerce and network security.

What is Data Science (DS)?

A degree in Data Science brings together the discipline of Mathematics, Computer Science, analytics and problem solving to provide diverse opportunities for future career paths.

What is Mathematics?

Math is the foundation of analytical thinking and simply the technical language used to describe complicated patterns and structure. The program of study provides students with a deep understanding of mathematical principles as they build greater knowledge in areas such as calculus, critical thinking, logical analysis, statistics, numerical methods and advanced problem solving. Math programs are becoming increasingly reliant on digital technology and are directly linked to computer science through areas like automated theorem proving, symbolic computations and optimization techniques.

TLU offers a Master of Science in Data Science and can be accomplished in as little as five years with a concurrent degree plan in Math or Computer Science.



The Numbers Say It All

Senior presentations and research allow students to **explore specialized areas** like artificial intelligence, Android applications, computational mathematics, advanced data analysis, and modeling of physical systems.

More than **90%** of Math, CS & DS majors are **employed or accepted to graduate school immediately after graduation.**

Of the **6** industries **expected to grow the most by 2020**, the tech industry currently **PAYS THE HIGHEST.**

Within the **next 10 years**, there will be **1 million more computing jobs** THAN **EMPLOYEES TO FILL THEM.**

TLU's Master of Science in Data Science
Math, CS, and DS provides **two** of the three **main skills** for this program where students can earn a master's degree **in just 5 years.**

San Antonio, located just 30 miles from TLU, is a national hub for the **fast-growing cybersecurity industry.**

Sources: Pew Research Center (pewresearch.org) January 2018, Computer Science Zone (computersciencezone.org) February 2017

What Can I Do With A Degree in Math, Computer Science, or Data Science?

- Actuarial Science
- Computer and Information Research Science
- Data Analyst
- Data Scientist
- Statistician
- Computational Research Analyst
- Information Technology (IT)
- Software Development
- Computer Network Architecture
- Operations Research
- Biomathematics
- Software Engineering
- Information Security Analyst
- Computer Systems Analyst
- High school and university teaching
- Finance
- Cryptography





OUR ALUMNI AT WORK

"Not a lot of people know this, but economics requires quite a bit of math. The department prepared me very well to continue my education, and the professors teach with so much enthusiasm and depth. I feel so ready to take on this next challenge. I would not be where I am today without them and I'm grateful for that."

Jillian Chase '18

Math and Education (7-12 Mathematics) Double Major
Master's Program in Economics *University of Texas at Austin*

Where can I work with a Math, CS & DS degree?

Microsoft U.S. DEPARTMENT OF ENERGY
AT&T **HEB** **PwC** **BOEING**
GENERAL MOTORS **APEX CAPITAL** **GOOGLE**
SOUTHWEST RESEARCH INSTITUTE

For more information, contact Department Chair, Dr. William Hager, at whager@tlu.edu or schedule a personalized campus tour at tlu.edu/visit and visit a class, talk to current students, and meet with your admissions representative and financial aid counselor.

