

# APPLIED STATISTICS

SOCI 3301 Research Methods in Social Sciences

## Purpose:

The Department of Mathematics and Physics of the College of Arts and Sciences at Texas A&M International University offers Certification in Applied Statistics, which aims to equip individuals with the skills and knowledge necessary to extract insights and knowledge from data, enabling them to pursue careers in data analysis. These programs validate skills, enhance credibility, and improve job prospects in the field, potentially leading to career advancement. Equipped with an Applied Statistics certificate you will be able to show potential employers that you have all the expertise required to manage and assess their data for the purpose of business growth and prosperity.

The Certificate in Applied Statistics is an undergraduate certificate program that is designed to provide education for students desiring to enter the workplace in one of the “in-demand” professional positions relating to data analysis. Specifically, students who successfully complete this 12 semester credit hours (SCH) certificate will gain an understanding of important applied statistics techniques and skill sets necessary to function in data analysis employment positions. The program is designed for both current undergraduate students enrolled at Texas A&M International University as well as a “stand-alone” certificate for non-TAMU persons.

## Student Learning Outcomes:

1. Apply statistical tools and processes necessary for data management and reproducibility.
2. Produce meaning from data employing statistical modeling strategies.
3. Learn the best practices related to Applied Statistics concepts and methods.
4. Articulate policy, privacy, security and ethical considerations in Applied Statistics projects.
5. Execute Applied Statistical analyses with professional statistical software.

Code	Title	Semester Credit Hours
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### Required Courses

STAT 3320	Data Analysis & Visualization *	3
STAT 3330	Sampling Fundamentals and Prac	3
STAT 4360	Applied Statistical Modeling	3
STAT 4370	Stat Communication and Ethics	3
<b>Total Semester Credit Hours</b>		<b>12</b>

\* STAT 3320 may be substituted, with permission of the certificate coordinator, by other discipline that has significantly applied statistical analysis content such as:

- BIOL 3416 Intro to Biological Statistics
- BIOL 4455 Bioinformatics
- CRIJ 4325 Statistics in Criminal Justice
- MIS 4320 Data Mining and Business Intel
- PHLT 3364 Biostats for Public Health

## Admissions Criteria:

Applicants for admission to the certificate program who are currently undergraduate students at TAMU must be in good academic standing with a cumulative grade point average of 2.0 or higher.