Statistics, PhD

LASTPPHD

Are you ready to put your mathematical mind to work using data analysis to solve problems for teams of engineers, scientists and other specialists? Learn the advanced nuances of mathematics and statistical analysis, and research how to apply these concepts in real-life models to build a better world through data.

Program description

Degree awarded: PHD Statistics
As a science, statistics focuses on data collection and data analysis by using theoretical, applied and computational tools. The PhD program in statistics reflects this breadth in tools and considerations while allowing students sufficient flexibility to tailor their program of study to reflect individual interests and goals. Research can be of a disciplinary or transdisciplinary nature.

At a glance

- **College/School:** The College of Liberal Arts and Sciences
- **Location:** Tempe

Degree requirements

84 credit hours, a written comprehensive exam, a prospectus and a dissertation

Required Core (3 credit hours)
STP 526 Theory of Statistical Linear Models (3)

Other Requirements (15 credit hours)
IEE 572 Design Engineering Experiments (3) or STP 531 Applied Analysis of Variance (3)
IEE 578 Regression Analysis (3) or STP 530 Applied Regression Analysis (3)
STP 501 Theory of Statistics I: Distribution Theory 3 (3)

STP 502 Theory of Statistics II: Inference (3)

STP 527 Statistical Large Sample Theory (3)

Electives (42 credit hours)

Research (12 credit hours)
STP 792 Research (12)

Culminating Experience (12 credit hours)
STP 799 Dissertation (12)

Additional Curriculum Information
Electives are chosen from statistics or related area courses approved by the student's supervisory committee.

Other requirements courses may be substituted with department approval.

Students must pass:

- one qualifying examination and coursework in analysis
- a written comprehensive examination
- a dissertation prospectus defense

Students should see the department website for examination information.

Each student must write a dissertation and defend it orally in front of five dissertation committee members.

Admission requirements

Applicants must fulfill the requirements of both the Graduate College and The College of Liberal Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in mathematics, statistics or a closely related area from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. statement of education and career goals

4. three letters of recommendation
5. proof of English proficiency

Additional Application Information

An applicant whose native language is not English must provide proof of <u>English proficiency</u> regardless of their current residency.

Completion of the following courses (equivalents at ASU are given in parentheses) is required. Applicants who lack any of these prerequisite courses must complete them before being considered for admission.

- calculus (MAT 270, 271 and 272)
- advanced calculus (MAT 371)
- linear algebra (MAT 342)
- computer programming (CSE 100)
- introductory applied statistics (STP 420)

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about <u>ASU tuition and financial aid</u> options to find out which will work best for them.

Application deadlines

Fall

expand

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Proficient in applying advanced statistical methods in coursework and research.
- Address an original research question in statistics.
- Able to complete original research in statistics.

Career opportunities

Statistical analysis and data mining have been identified as two of the most desirable skills in today's job market. Data, and the analysis of data, is big business, and the Department of Labor projects that overall employment of mathematicians and statisticians will grow 33% between 2020 and 2030, much faster than the average for all occupations.

For graduates of the doctoral program in statistics, that means a broad variety of career opportunities in fields as diverse as business, finance, engineering, technology, education, marketing, government and other areas of the economy.

These are just a few of the top career opportunities available for a graduate with a doctoral degree in statistics:

- actuary
- business consultant or analyst
- data science professor, instructor or researcher
- data scientist
- faculty-track academic
- financial analyst
- market research analyst
- software engineer
- statistician

Contact information

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