COLLEGE OF NATURAL SCIENCES
THE UNIVERSITY OF TEXAS AT AUSTIN

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# M.S. in Statistics Application for Ph.D. Students
## DEPARTMENT OF STATISTICS & DATA SCIENCES

_____     _____     _____
**Name**                                    **UTEID**            **Birthdate**

_____     _____
**Email**                                   **Phone**

_____
**Address**                                 **City**        **State**        **Zip**

_____     _____
**Current Program**                         **Graduate Advisor**

_____   _____   _____   _____
**Anticipated Graduation Date**            **GPA**      **GRE Quantitative**  **GRE Verbal**

**Area of Interest:** _____

Please complete the table below:

| Course Type | Course Name & Number | University | Year | Grade |
|---|---|---|---|---|
| Calculus | | | | |
| Calculus-based probability | | | | |
| Calculus-based statistics | | | | |
| Linear algebra | | | | |

_____   _____   _____   _____
**Student Signature**              **Date**     **Graduate Advisor's Signature**  **Date**

_____   _____
**Supervisor's Signature**         **Date**

**PLEASE NOTE:** Turn in this form, the mathematics preparation form, and a personal statement **to the Graduate Coordinator** for the **Department of Statistics & Data Sciences <u>via DocuSign</u>**. Your Ph.D. supervisor will submit a separate letter of recommendation as part of your application. All applications are reviewed by members of the admissions committee.

Admitted        Denied

## MS in Statistics Mathematics Preparation Form
*Please complete and submit with your application to the MS in Statistics program.*

1. Do you have an undergraduate probability textbook? _____ If yes, what title and author?

_____

2. Do you have an undergraduate mathematical statistics textbook? _____ If yes, what title and author?

_____

3. Have you used some statistical and/or mathematical software? _____

 If yes, what? _____

 Do you currently have access to a computer with this software? _____

4. In what courses you have taken have you covered each of these topics? List the courses in the table and then refer to them in this top list by the "Ref #" so you don't have to repeatedly write the title. Use the back of the page if you need more room to list your courses.

List statistics and probability courses you have taken (and passed):

| Ref # | Name of course | Level (Upper division undergrad, etc.) | Textbook (Title, author, or whatever you remember) | When and where |
|-------|----------------|----------------------------------------|----------------------------------------------------|----------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

  a. Converting an experiment with a random outcome to a random variable and choosing an appropriate probability distribution.   **Course Ref. # _____**
  b. Basic probability calculations in standard discrete and continuous distributions, including distributions such as the gamma and beta which require skill at handling two parameters. **Course Ref. # _____**
  c. Computation of expected values and variances in a variety of distributions.  **Course Ref. # _____**
  d. Joint and marginal distributions, conditional distributions, covariance, independence. **Course Ref. # _____**
  e. Familiarity with basic ideas about sampling and experimental design. **Course Ref. # _____**
  f. Use and interpretation of confidence intervals and hypothesis tests. **Course Ref. # _____**
  g. Power calculations for hypothesis tests. **Course Ref. # _____**
  h. Sampling distributions of sample means and sample proportions. **Course Ref. # _____**
  i. Sampling distributions of minimum and maximum statistics. **Course Ref. # _____**
  j. Finding maximum likelihood estimators.  **Course Ref. # _____**
  k. Comparison of estimators, using bias and comparison of variances. **Course Ref. # _____**