



## MPS in Applied Statistics – Application to Graduate

Please return this form to Phillip Rusher, 301 Malott Hall, 255-8066, par246@cornell.edu no later than 3 weeks before graduation date.

### Student Information

Name (print) \_\_\_\_\_

Graduation Date (check one):    Jan.                      May                      August

Option #: \_\_\_\_\_ Advisor Name: \_\_\_\_\_

Cornell ID number: \_\_\_\_\_ NetID: \_\_\_\_\_ Phone: \_\_\_\_\_

### Acceptance of Terms for MPS in Applied Statistics Requirements:

I have reviewed this Application to Graduate with my faculty advisor(s). I understand that it is my responsibility to complete the coursework listed below, and if I fail to do so, I may not be awarded my degree. I further understand that my address in student center must be current for me to receive my diploma as well as important information from the commencement office.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

### MPS Required Courses

**Please check all courses you have completed or expect to complete by the end of the current semester.**

#### Required for both Option I and II

*Required courses must be taken for a letter grade*

STSCI 5030 – Linear Models with Matrices (4 credits)

STSCI 5080 – Probability Models and Inference (4 credits)

STSCI 5953 – MPS Professional Development (1 credit, S/U only)

STSCI 5999 – Applied Statistics MPS Data Analysis Project (spring only) (4 credits)

#### Additional courses required for Option II only

STSCI 5060 – Database Management and SAS High Performance Computing with DBMS (4 credits)

STSCI 4060 – Python Programming and its Applications in Statistics (3 credits)

STSCI 5065 – Big Data Management and Analysis (3 credit)

## **MPS Electives**

*At most, one elective per semester can be taken S/U. Electives taken during the summer session must be taken for a letter grade.*

Option I students must take at least 12 credit hours, and Option II students at least 4 credits of Statistical Science electives from this list. Option II students cannot use STSCI 4060, 5060, or 5065 as a Statistical Science elective since these courses are required as core Option II courses.

### **Statistical Science Electives**

STSCI 3100: Statistical Sampling (4 credits)

STSCI 4060: Python Programming and its Applications in Statistics (3 credits)

STSCI 4100: Multivariate Analysis (4 credits)

STSCI 4110: Categorical Data (4 credits)

STSCI 4140: Applied Design (4 credits)

STSCI 4270: Survival Analysis (4 credits) (3 credits)

STSCI 4520: Statistical Computing (4 credits)

STSCI 4550: Applied Time Series Analysis (4 credits)

STSCI 4600 Statistics for Risk Modeling (3 credits)

STSCI 4630: Operations Research Tools for Financial Engineering (3 credits)

STSCI 4740: Data Mining and Machine Learning (4 credits)

STSCI 4780: Bayesian Data Analysis: Principles and Practice

STSCI 5010: Applied Statistical Computation with SAS (4 credits)

STSCI 5060: Database Management and SAS High Performance Computing with DBMS (4 credits)

STSCI 5065: Big Data Management and Analysis (3 credits)

STSCI 5640: Statistics for Financial Engineering (4 credits)

STSCI 6070: Functional Data Analysis (3 credits)

STSCI 6520: Computationally Intensive Statistical Methods (4 credits)

**Other Approved MPS Electives**

- AEM 7100: Econometrics I (3 credits)
- BTRY 3090: Theory of Interest (3 credits)
- BTRY 4830: Quantitative Genomics and Genetics (4 credits)
- BTRY 4840: Computational Genetics and Genomics (4 credits)
- BTRY 6381: Bioinformatics Programming (3 credits)
- CS 4780: Machine Learning (4 credits)
- CS 5786: Machine Learning for Data Science (4 credits)
- MATH 4740: Stochastic Processes (4 credits)
- ORIE 3120: Practical Tools for Operations Research, Machine Learning, and Data Science (4 credits)
- ORIE 4630: Operations Research Tools for Financial Engineering (3 credits)
- ORIE 4741: Learning with Big Messy Data (4 credits)
- ORIE 5510: Introduction to Engineering Stochastic Processes I (4 credits)
- ORIE 5580: Simulation Modeling & Analysis (4 credits)
- ORIE 5581: Monte Carlo Simulation (2 credits)
- ORIE 5600: Financial Engineering with Stochastic Calculus I (4 credits)
- ORIE 5610: Financial Engineering with Stochastic Calculus II (4 credits)
- ORIE 5640: Statistics for Financial Engineering (4 credits)
- ORIE 6500: Applied Stochastic Processes (4 credits)
- ORIE 6741: Bayesian Machine Learning (3 credits)
- ORIE 6780: Bayesian Statistics and Data Analysis (3 credits)

## Core Course Substitutions

\_\_\_\_\_ substitute for \_\_\_\_\_  
Course Number and Title Course Number and Title

\_\_\_\_\_ substitute for \_\_\_\_\_  
Course Number and Title Course Number and Title

## Electives

### Other courses counted toward the MPS Degree (electives)

Course Number: \_\_\_\_\_ Course Title: \_\_\_\_\_

Course Number: \_\_\_\_\_ Course Title: \_\_\_\_\_

## To Be Completed by Academic Advisor

The above coursework will satisfy the MPS requirements  
The above coursework will not satisfy the MPS requirements

Advisor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

*Updated February 3, 2021*