

Progress Toward Completion of the Mathematics Major

(Statistics Concentration)

Student's Name

Net ID

Faculty Advisor

Courses Needed to Complete the Major

Filled Out By

Initials

Date

Students must complete nine courses, as described in items 1– 3 below, under the following constraints:

- At least two of the MATH courses taken must be at the 4000 level (or above).
- A course may be counted toward the major only if it is taken for a letter grade and a grade of C– or better is received for the course.
- No course may be used to satisfy more than one requirement for the major.
- 2-credit courses count as half courses.
- MATH courses numbered between 5000 and 5999 do not count toward the major.

1. Two Courses in Algebra.

Transfer Credit: _____

- _____ MATH 3320 Introduction to Number Theory
- _____ MATH 3360 Applicable Algebra
- _____ MATH 4310 Linear Algebra / _____ 4330 Honors Linear Algebra
- _____ MATH 4320 Introduction to Algebra / _____ 4340 Honors Introduction to Algebra
- _____ MATH 4370 Computational Algebra
- _____ MATH 4500 Matrix Groups

2. Two Courses in Analysis.

Transfer Credit: _____

- _____ MATH 3110* Introduction to Analysis
- _____ MATH 3210 Manifolds and Differential Forms
- _____ MATH 3230* Introduction to Differential Equations
- _____ MATH 4130* Honors Introduction to Analysis I
- _____ MATH 4140 Honors Introduction to Analysis II
- _____ MATH 4180* Introduction to the Theory of Functions of One Complex Variable
- _____ MATH 4200 Differential Equations and Dynamical Systems
- _____ MATH 4220* Applied Complex Analysis
- _____ MATH 4240 Wavelets and Fourier Series
- _____ MATH 4250 Numerical Analysis and Differential Equations [also CS 4210]
- _____ MATH 4260 Numerical Analysis: Linear and Nonlinear Problems [also CS 4220]
- _____ MATH 4280* Introduction to Partial Differential Equations

***Overlapping content:** Students will receive credit for only one course in each group: (1) MATH 3110, 4130; (2) MATH 3230, 4280; (3) MATH 4180, 4220; (4) MATH 4310, 4330; (5) MATH 4320, 4340; (6) MATH 4710, ECON 3130 (formerly 3190), BTRY/ILRST/STSCI 3080 (formerly 4080); (7) MATH 4720, ECON 3130 (formerly 3190), BTRY 4090.

3. Concentration in Statistics.

Transfer Credit: _____

Five additional courses from (xiv), (xv) and (xvi) below.

(xiv) Both: _____ MATH 4710* Basic Probability _____ MATH 4720* Statistics

(xv) One additional MATH course numbered 3000 or above:

(xvi) Two courses in other depts with significant content in probability and statistics, complementing (xv):

_____ BTRY 3020 Biological Statistics II [also NTRES 4130, STSCI 3200] **if taken spring 2013 or earlier**

_____ BTRY 4820 Statistical Genomics: Coalescent Theory and Human Population Genomics
[co-meets with BTRY 6820]

_____ BTRY 6790 Probabilistic Graphical Models [also CS 6782]

_____ CS 4780 Machine Learning [co-meets with CS 5780]

_____ ECON 3140 Econometrics (formerly ECON 3200)

_____ ORIE 3510 Introduction to Engineering Stochastic Processes I [also STSCI 3510]

_____ ORIE 4520 Introduction to Engineering Stochastic Processes II

_____ ORIE 4600 Introduction to Financial Engineering

_____ ORIE 4630 Operations Research Tools for Financial Engineering

_____ ORIE 4740 Statistical Data Mining I

_____ ORIE 5600 Financial Engineering with Stochastic Calculus I

_____ ORIE 5610 Financial Engineering with Stochastic Calculus II

_____ STSCI 3100 Statistical Sampling [also BTRY 3100, ILRST 3100]

_____ STSCI 3520 Statistical Computing [also BTRY 3520]

_____ STSCI 4030 Applied Linear Statistical Models via Matrices [also BTRY 4030]

_____ STSCI 4100 Multivariate Analysis [also BTRY 4100, ILRST 4100]

_____ STSCI 4110 Statistical Methods III: Categorical Data [also ILRST 4110, co-meets with BTRY 6030]

_____ STSCI 4140 Statistical Methods IV: Applied Design [also BTRY 4140, ILRST 4140]

_____ STSCI 4550 Applied Time Series Analysis [also ILRST 4550, ORIE 5550]

_____ (approved by faculty advisor)

Note: If MATH 4740 is used for (xv), neither ORIE 3510 nor 4520 may be counted toward (xvi). At most one regression course (ECON 3140 [formerly 3200] or STSCI 4030/BTRY4030) is allowed for (xvi).

Transfer Credit / Study Abroad Courses Applied to the Major

Course Number & Title	Institution	Requirement
_____	_____	_____
_____	_____	_____
_____	_____	_____

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