Progress Toward Completion of the Mathematics Major
(Mathematical Biology 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 Mathematical Biology.   Transfer Credit: _____

Five additional courses from (viii) and (ix) below.

(viii) Three biology courses that have mathematical content or provide background necessary for work at the interface between biology and mathematics:

_____ BIOEE 3620 Dynamic Models in Biology [also MATH 3620]
_____ BIONB 4220 Modeling Behavioral Evolution
_____ BTRY 3080* Probability Models and Inference [also ILRST/STSCI 3080, formerly 4080]
_____ BTRY 4090* Theory of Statistics [also STSCI 4090]
_____ BTRY 4820 Statistical Genomics: Coalescent Theory and Human Population Genomics
         [co-meets with BTRY 6820]
_____ BTRY 4830 Quantitative Genomics and Genetics [co-meets with BTRY 6830]
_____ BTRY 4840 Computational Genomics [co-meets with BTRY 6840]
_____ NTRES 4110 Quantitative Ecology and Management of Fisheries Resources

_____ _____ (approved by faculty advisor)

(ix) Two mathematics courses numbered 3000 or above. MATH 4200 and 4710* are particularly appropriate.

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Transfer Credit / Study Abroad Courses Applied to the Major

Course Number &Title	**Institution**	**Requirement**

*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.