

## Applied Mathematics Specialization Checklist

(for students declaring the specialization on or after Fall 2018)

### 1. Choose one of the following options for the computer science correlate:

\_\_\_\_\_ CSC 220 Computer Science I **AND** CSC 230 Computer Science II

\_\_\_\_\_ CSC 250 Accelerated Computer Science I and II

\_\_\_\_\_ CSC 220 Computer Science I **AND** MAT 341 Computational Mathematics

(for any option: grade of C- or better in CSC220)

### 2. Choose one of the following options for the lab science correlate:

\_\_\_\_\_ BIO 201 Foundations of Biological Inquiry

\_\_\_\_\_ CHE 201 General Chemistry I

\_\_\_\_\_ PHY 201 General Physics I

### 3. Required Core Courses:

\_\_\_\_\_ MAT 127 Calculus A

\_\_\_\_\_ MAT 128 Calculus B

\_\_\_\_\_ MAT 229 Multivariable Calculus

\_\_\_\_\_ MAT 200 Proof Writing Through Discrete Mathematics

\_\_\_\_\_ MAT 205 Linear Algebra

(Average GPA of MAT 127, 128, 200, 205, 229 must be at least 2.5)

\_\_\_\_\_ MAT275 Sophomore Seminar

\_\_\_\_\_ MAT 310 Real Analysis

\_\_\_\_\_ MAT 326 Differential Equations

\_\_\_\_\_ STA 215 Statistical Inference

\_\_\_\_\_ MAT 498 Capstone (must be the Applied Mathematics section of Capstone)

(*Capstone Prerequisite*: attendance to 4 seminars in junior/senior year)

**4. MAT/STA Options (6 course units required)**

**At most two of the six courses may have an STA prefix. At most one of the six courses may have a non-MAT or STA prefix.**

- \_\_\_\_\_ 400 level course from the Applied Math Options list
- \_\_\_\_\_ 300 or 400 level course from the Applied Math Options list
- \_\_\_\_\_ 300 or 400 level course from the Applied Math Options list
- \_\_\_\_\_ Any course at the 300 or 400 level with MAT or STA prefix
- \_\_\_\_\_ Any course at the 300 or 400 level with MAT or STA prefix
- \_\_\_\_\_ Any course at the 300 or 400 level with MAT prefix, **OR**  
BIO 471/CSC 471, PHY 401, CSC 335, or CSC 445

**Applied Math Options List:**

- MAT 303 Cryptography
- MAT 315 Topics in Linear Algebra
- MAT 316 Probability
- MAT 317 Linear Programming
- MAT 330 Mathematical Biology
- MAT 331 Numerical Analysis
- MAT 341 Computational Mathematics
- MAT 426 Partial Differential Equations
- MAT 454 Seminar in Applied Mathematics
- STA 318 Operations Research