**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)

1. **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

1. **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)

1. **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