Applied Mathematics Specialization Checklist

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

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

    _____MAT 275 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)

2. **MAT/STA Options**

    - **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.**

    - **Students can take at most one course unit of independent study, guided study, or independent research as one of the six course units (MAT/STA 39x/49x). However, this will not count as an applied math elective course**

    _____400 level course from the Applied Math Options list

    _____300 or 400 level course from the Applied Math Options list

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    _____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, CHE 372, CSC 335, CSC 445, FIN 360, PHY 401

3. 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)

4. 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

* Any lab course in Biology, Chemistry, or Physics numbered 200 or higher except PHY306 or PHY390.

Applied Math Options List:

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 430 Seminar in Dynamical Systems

MAT 454 Seminar in Applied Mathematics

STA 318 Operations Research