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
- 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, 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 other lab course in Biology, Chemistry, or Physics numbered 200 or higher except PHY306 or PHY390.

Applied Math Options List:

- MAT 303 Cryptography and Coding Theory
- 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