Fall 2020

Department of Mathematics and Statistics

List of Mathematics & Statistics Options

For Students in Applied Mathematics Specialization

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| --- | --- |
| MAT 301 Number Theory MAT 303 Cryptography\*MAT 305 Abstract Algebra MAT 315 Topics in Linear Algebra\* MAT 316 Probability\* MAT 317 Linear Programming\* MAT 320 Complex Analysis MAT 330 Mathematical Biology\*MAT 331 Numerical Analysis\* MAT 341 Computational Mathematics\*MAT 351 Geometry MAT 370 Topics in Mathematics\*+ MAT 391 Independent Study in Mathematics# MAT 392 Guided Study in Mathematics# MAT 393 Independent Research in Mathematics# MAT 403 Advanced Calculus with Topology MAT 405 Topology MAT 407 Projective Geometry MAT 426 Partial Differential Equations\*MAT 440 Mathematical Logic MAT 451 Seminar in Algebra  | MAT 452 Seminar in Geometry and Topology MAT 453 Seminar in Analysis\*+MAT 454 Seminar in Applied Mathematics\* MAT 470 Topics in Mathematics\*+ MAT 492 Guided Study in Mathematics II# MAT 493 Independent Research in Mathematics II# MAT 494 Independent Study in Mathematics II# STA 303 Design of Experiments STA 304 Sampling and Nonparametric Statistics STA 305 Regression Analysis STA 306 Applied Multivariate Analysis STA 307 Data Mining and Predictive Modeling STA 314 Statistical Quality Control STA 318 Operations Research\* STA 370 Topics in StatisticsSTA 391 Independent Study in Statistics# STA 392 Guided Study in Statistics# STA 393 Independent Research in Statistics# STA 404 Computational and Bayesian StatisticsSTA 410 Mathematical Statistics |

**\*** Denotes an Applied Mathematics option.

**+** Denotes a topics course that may be an Applied Mathematics option depending on the topic. The department notifies the students each year which topics courses will qualify.

**#** Students cannot use independent study, guided study, or independent research courses to fulfill the 3 required Applied Mathematics options. Students can take at most one course unit of independent study, guided study, or independent research to fulfill the Applied Mathematics/Mathematics/Statistics options. This requires approval by the Applied Mathematics Committee. When taking an independent study, guided study, or independent research course, a student’s course load should not be more than 4.5 course units. Independent study, guided study, or independent research courses may not be taken in order to improve a grade, or to replace a course that a student failed to sign up for.

Revised: June 2020