

Department of Mathematics and Statistics  
 List of Mathematics & Statistics Options  
 For Students in Applied Mathematics Specialization

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

\* 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.