

Checklist for the Bachelor of Science in Mathematics, Statistics Option

Listed below are the requirements for the math major portion of the Bachelor of Science in Mathematics with an option in Statistics. Students also need to satisfy the requirements of the university and the College of Science. Frequent consultations with advisors from the Department of Mathematics and the Department of Statistics are recommended to monitor timely degree completion.

A grade of at least C– and a GPA of 2.25 are required in all upper-division mathematics and statistics courses used to fulfill degree requirements. An OSU GPA of 2.00 is required by the College of Science. No course used to fulfill requirements for your major may be taken “S/U.”

Lower Division:

- MTH 251 - 256 The Calculus Sequence (MTH 251, 252, 253, 254, 255, 256)
- Physics 211 General Physics with Calculus
- MTH 341 Linear Algebra I
- Recommended: ST 201 Principles of Statistics or
ST 351 Intro to Statistical Methods

Upper Division:

Part A: required Mathematics core, all the following courses

- MTH 355 (F,W,S) Discrete Mathematics
- MTH 311 (F,W) Advanced Calculus I
- MTH 312 (W,S) Advanced Calculus II
- MTH 342 (F,W,S) Linear Algebra II
- MTH 343 (W,S) Introduction to Modern Algebra
- WIC¹ MTH 323 (W) Mathematical Modeling (preferred) or
MTH 333 (F) Fundamental Concepts of Topology or
MTH 338 (S) Non-Euclidean Geometry

Part B: the Mathematics and Statistics advanced core, all the following courses

- MTH 463 (F) Probability I (3)
- MTH 464 (W) Probability II (3)
- ST 411 (F,W, Su) Methods of Data Analysis (4)
- ST 412 (W,S) Methods of Data Analysis (4)
- ST 421 (F,Su) Introduction to Mathematical Statistics (4)
- ST 422 (W,Su) Introduction to Mathematical Statistics (4)

Part C: depth in Option, 1 course from the following list

- MTH 465 (S) Probability III (3)
- MTH 467 (W) Actuarial Mathematics (3)
- ST 413 (S) Methods of Data Analysis (4)
- ST 415 (S) Design and Analysis of Planned Experiments (3)
- ST 431 (F) Sampling Methods (3)
- ST 439 (Su) Survey Methods (3)
- ST 441 (F) Probability, Computing, and Simulation in Statistics (4)
- ST 443 (S) Applied Stochastic Models (3)

Part D: breadth in Mathematics, 2 courses from the following list

- MTH 351 (F,W,S) Intro to Numerical Analysis or
MTH 451 (F) Numerical Linear Algebra
- MTH 411 (F) Real Analysis
- MTH 440 (F) Computational Number Theory
- MTH 443 (F) Abstract Linear Algebra
- MTH 430 (S) Metric Spaces and Topology
- MTH 434 (W) Introduction to Differential Geometry
- MTH 480 (W) Systems of Ordinary Differential Equations or
MTH 481 (F) Mathematics for Scientists and Engineers
- MTH 483 (S) Complex Variables
- MTH 420 (S) Models and Methods of Applied Mathematics

***Course offerings and schedules are subject to change.** Please consult the Department of Statistics for a listing of yearly courses (<http://www.stat.oregonstate.edu/content/yearly-courses>) and alternate year courses (<http://www.stat.oregonstate.edu/content/alternate-year-courses>).

¹ Writing Intensive Course, a component of the Baccalaureate Core.