

Math Major with Statistics Track Requirements

Catalog Year: 2015-16

Degree: Bachelor of Science

Credit Hours: 46+

"PR" indicates a pre-requisite. "CO" indicates a co-requisite.

Courses within this major may also satisfy general education requirements. Please consult <http://registrar.cofc.edu/general-edu> for more information.

Required Courses

- MATH 120 Introductory Calculus (4) PR: Placement or C- or better in MATH 111
- MATH 203 Linear Algebra (3) PR: MATH 120 or instructor permission
- MATH 220 Calculus II (4) PR: MATH 120 or HONS 115
- MATH 221 Calculus III (4) PR: MATH 220

Select one of the following tracks (Actuarial, Applied, Pure, or Statistics):

- MATH 250 Statistical Methods I (3) PR: MATH 105 with a C- grade or better or MATH 111 or MATH 120 or permission of instructor
- MATH 295 Introduction to Abstract Mathematics (3) PR: MATH 203 or MATH 221
- MATH 311 Advanced Calculus I (3) PR: MATH 221 and MATH 295
- MATH 350 Statistical Methods II (3) PR: MATH 120 and MATH 250
- MATH 430 Mathematical Statistics I (3) PR: MATH 221
- MATH 431 Mathematical Statistics II (3) PR: MATH 430

Select one of the following course/lab pairings:

- _____ _____ lab

CSCI 220 Computer Programming I (3) PR: CSCI 120 or CSCI 180 or MATH 111 or higher or department permission

CSCI 220L Computer Programming I Lab (1) PR or CO: CSCI 220

OR

MATH 245 Numerical Methods and Mathematical Computing (3) PR: MATH 203 or MATH 220 or instructor permission; CO: MATH 246

MATH 246 Mathematical Computing and Programming Lab (1) PR: MATH 220 or instructor permission

Select 9 additional credit hours from the following:

- _____ _____ _____

CSCI 334 Data Mining (3) PR: CSCI 221 with a C- or better, MATH 207 and MATH 250

MATH 440 Statistical Learning I (3) PR: MATH 203 and MATH 220 and MATH 350

MATH 441 Statistical Learning II (3) PR: MATH 440

MATH 449 Linear Models (3) PR: MATH 203 and MATH 350

MATH 451 Linear Programming and Optimization (3) PR: MATH 203 and MATH 221, and CSCI 220 or MATH 245, or instructor permission

MATH 452 Operations Research (3) PR: MATH 203 and MATH 430, and CSCI 220 or MATH 245

MATH 455 Bayesian Statistical Methods (3) PR: MATH 430

MATH 460 Stochastic Processes (3) PR: MATH 430

MATH 461 Time Series (3) *PR: MATH 430*

MATH 475* Statistical Consulting (3) *PR: MATH 350 and one of MATH 440 or MATH 441 or MATH 451 or MATH 452 or CSCI 334*

Note: *MATH 475 Statistical Consulting is the recommended capstone for this track.