# BHA-Statistics

Fall 2023

## Bachelor of Humanities and Arts (BHA)

### Dietrich College (DC) Concentration in Statistics — 81 units (minimum)

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In the BHA concentration in Statistics, students develop and master a wide array of skills in computing, mathematics, statistical theory, and the interpretation and display of complex data. In addition, students with a BHA concentration in Statistics gain experience in applying statistical tools to real problems in other fields and learn the nuances of interdisciplinary collaboration.

BHA students take at least 9 courses in their DC concentration, for a minimum of 81 units. A completed DC Concentration Declaration Sheet must be approved by the concentration advisor and submitted to the BXA office by spring mid-semester break of the student's sophomore year. BHA students who are admitted through internal transfer must have chosen a DC concentration at the time of their application, which serves as declaration.

### Prerequisites

These courses are not counted as part of your DC Concentration. They may be used to satisfy general education or free elective requirements.

| | | |
|---|---|---|
| 21-120 | Differential and Integral Calculus | 10 |
| *21-256* | Multivariate Analysis | 9 |
| *or 21-259* | Calculus in Three Dimensions (10) | |
| *21-240* | Matrix Algebra with Applications | 10 |
| *or 21-241* | Matrices and Linear Transformations (11) | |
| *or 21-242* | Matrix Theory (11) | |
| *15-110* | Principles of Computing | 10 |
| *or 15-112* | Fundamentals of Programming and Computer Science (12) | |

Note: 21-240/241/242 must be completed before taking 36-401 Modern Regression. 21-241 and 21-242 are intended only for students with a very strong mathematical background.

### Statistics Core — (6 courses, 54 units)

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|---|---|---|
| *36-202* | Methods for Statistical & Data Science | 9 |
| *or 36-290* | Introduction to Statistical Research Methodology | |
| *36-235* | Probability and Statistical Inference I (recommended) | 9 |
| *or 36-225* | Introduction to Probability Theory | |
| *36-236* | Probability and Statistical Inference II (recommended) | 9 |
| *or 36-226* | Introduction to Statistical Inference | |
| 36-350 | Statistical Computing | 9 |
| 36-401 | Modern Regression | 9 |
| 36-402 | Advanced Methods for Data Analysis | 9 |

### Special Topics and Electives — (3 courses, 27 units)

Students must take a total of three courses from Special Topics (numbered 36-46x) and Statistics Electives listed below. Students will consult with the concentration advisor to select the Special Topics and Electives courses that best fit their areas of interest.

| | | |
|---|---|---|
| 36-303 | Sampling, Survey and Society | 9 |
| 36-311 | Statistical Analysis of Networks | 9 |
| 36-313 | Statistics of Inequality and Discrimination | 9 |
| 36-315 | Statistical Graphics and Visualization | 9 |
| 36-318 | Introduction to Causal Inference | 9 |
| 36-46x | Special Topics (topics and offerings vary) | 9 |
| 36-490 | Undergraduate Research | 9 |
| 36-493 | Sports Analytics Capstone | 9 |
| 36-497 | Corporate Capstone Project | 9 |