

## Data Science (BS)

The following plan is possible on the presumption that an incoming student has an Associate of Arts (AA) degree and has completed the equivalent to **MATH 198** (Calculus I), **MATH 263** (Calculus II), **CS 180** (Intro to Computer Science I), **CS 181** (Intro to Computer Science II), and **STAT 190** (Basic Statistics) prior to enrolling at Truman State University.

### FALL - Semester 1

- Data 222: Fundamentals of Data Science (3 cr)
- STAT 398: Intermediate Seminar in Statistics and Data Science (1 cr)
- MATH 357: Linear Algebra (3 cr)
- *Specialization Block course*<sup>^</sup>: STAT 310: Data Collection & Statistical Communication OR CS 260 Object-Oriented Programming and Design (3 cr)
- STAT 330: Linear Models OR STAT 378: Linear Regression/Time Series OR STAT 331: Biostatistics OR STAT 530: Applied Statistical Methods I (3 cr)

### FALL - Semester 3

- STAT 497: Statistics Capstone Experience (2 cr)\*
- STAT 498: Senior Seminar in Statistics and Data Science (1 cr)\*
- CS 430: Databases (3 cr)
- STAT 370: Probability **OR** CS 191: Computing Structures **OR** MATH 347: Discrete Mathematics (3 cr)
- DATA 324: Data Visualization (3 cr)
- Elementary Foreign Language I (3 cr)

### SPRING - Semester 2

- DATA 322: Intermediate Data Science (3 cr)
- DATA 344: WE/Data Ethics (3 cr)
- STAT 250: Statistical Computing (3 cr)
- JINS 3XX: WE/Junior Interdisciplinary Seminar (3 cr)
- Bachelor of Science Required Support

### SPRING - Semester 4

- DATA 520: Data Mining and Multivariate Statistics
- *Specialization Block course*<sup>^</sup>: STAT 392: Statistical Consulting with Practicum **OR** CS 310: Data Structures and Algorithms (3 cr)
- Bachelor of Science Required Support
- Elementary Foreign Language II (3 cr)
- Major Elective (as needed)

### NOTES:

- WE = Writing Enhanced course
- (^) - The Data Science major offers 3 *specialization blocks*, all of which require at least 6 credits hours of coursework: **Intermediate Coding**, **Data Consulting**, or **Statistics**. Students have the choice to complete one or more of the specialization blocks.
- (\*) - STAT 497 and STAT 498 are co-requisites
- **The Dialogues curriculum** requires a certain number of courses/credit hours in the following Perspectives: Social, Arts and Humanities, STEM, Communications, and Statistics. The exact number of courses a student will be required to take during their undergraduate career varies individually according to the credit transferred in.

Department Chair: Please contact the Center for Academic Excellence (advise@truman.edu) with any updates to the plan above.