

# BACHELOR OF SCIENCE (BS) DATA ANALYTICS: DATA VISUALIZATION SPECIALIZATION

## Major Prerequisites (13 hours)

These courses may overlap with the General Education curriculum where appropriate. Courses in **BOLD** should be completed before submitting an application to the Data Analytics major.

| Department                     | Course   | Hours | Term Offered |
|--------------------------------|--|-------|--------------|
| Math                           | <b>Math 1151</b> (1161 or 1181H) – Calculus I        | 5     | AU/SP/SU     |
|                                | <b>Math 1152</b> (1172, 2162 or 2182H) – Calculus II | 5     | AU/SP/SU     |
| Computer Science & Engineering | <b>*CSE 1223</b> – Computer Programming in Java      | 3     | AU/SP/SU     |

\*CSE 1222 or CSE placement level A can also fulfill this prerequisite; however, 1223 is *strongly* preferred.

## Core Requirements (51 hours)

The Data Analytics Core courses follow a strict pre-requisite structure. Some courses are only offered once per year. Failure to successfully enroll in and complete these courses will delay graduation.

| Department                       | Course   | Hours | Terms Offered |
|----------------------------------|--|-------|---------------|
| Math                             | Math 2568 – Linear Algebra                           | 3     | AU/SP/SU      |
| Industrial & Systems Engineering | ISE 3230 – Systems Modeling and Optimization         | 3     | AU            |
|                                  | ISE 5760 – Data Visualization                        | 3     | SP            |
| Computer Science & Engineering   | <b>CSE 2221</b> – Software I: Software Components    | 4     | AU/SP/SU      |
|                                  | CSE 2231 – Software II: Development & Design         | 4     | AU/SP/SU      |
|                                  | CSE 2321 – Foundations I: Discrete Structures        | 3     | AU/SP/SU      |
|                                  | CSE 2421 or 3430 – Systems I: Computer Systems       | 4     | AU/SP/SU      |
|                                  | CSE 3241 – Databases I: Computer Architecture        | 3     | AU/SP/SU      |
|                                  | CSE 3244 or 5242 – Adv. DB & Cloud Computing         | 3     | AU/SP         |
|                                  | CSE 5243 – Data Mining                               | 3     | AU/SP         |
| Statistics                       | STAT 3201 – Probability for Data Analytics           | 3     | AU/SP         |
|                                  | STAT 3202 – Statistical Inference for Data Analytics | 4     | AU/SP         |
|                                  | STAT 3301 – Statistical Modeling for Discovery I     | 3     | AU            |
|                                  | STAT 3302 – Statistical Modeling for Discovery II    | 3     | SP            |
|                                  | STAT 4620 – Statistical Learning                     | 2     | AU            |
|                                  | STAT 3303 – Statistical Decision Making              | 3     | SP            |

## Data Visualization Specialization (15 hours)

|   |   |       |
|---|---|-------|
| DESIGN 5505 – Information Design                      | 3 | AU    |
| CSE 5544 – Introduction to Data Visualization         | 3 | AU/SP |
| ACCAD 5141 – Interactive Arts Media                   | 3 | SP    |
| ACCAD 5150 – Emerging Trends in Data Visualization    | 3 | SP    |
| ACCAD/STAT 5xxx – Capstone in ACCAD or Data Analytics | 3 | SP    |

## GENERAL EDUCATION

Please visit <http://artsandsciences.osu.edu/academics/current-students/advising/ge> for a list of your General Education curriculum requirements.