

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. Online options may be available for courses marked ●. Please refer to the ASC General Education course list for GE online courses.

| Department | Course | Hours | Term Offered |
|--------------------------------|--|-------|--------------|
| Math | Math 1151 ● (1161 or 1181H) – Calculus I | 5 | AU/SP/SU |
| | Math 1152 ● (1172, 2162 or 2182H) – Calculus II | 5 | AU/SP/SU |
| Computer Science & Engineering | *CSE 1223 – 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 | CSE 2221 – 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 (16 hours)

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| 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 |
| STAT 4911 – Capstone in Data Analytics | 4 | SP |

GENERAL EDUCATION

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