

Data Science, BS

Academic Plans

Four-Year Graduation Plan

The Four-Year Graduation Plan is not available to students majoring in data science. Students work with their advisors on individual graduation plans.

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Data Science, BS

Course	Title	Hours
Academic Career		
Any Semester		
GE CLAS Core: Sustainability ^a		
Hours		0
First Year		
Fall		
CS:1210	Computer Science I: Fundamentals	4
RHET:1030 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4
MATH:1550	Engineering Mathematics I: Single Variable Calculus ^b	4
GE CLAS Core: World Languages First Level Proficiency or elective course ^c		4 - 5
CSI:1600	Success at Iowa	2
Hours		17-19
Spring		
ENGL:1200 or RHET:1030	The Interpretation of Literature or Rhetoric	3 - 4
STAT:2010	Statistical Methods and Computing	3
CS:2210	Discrete Structures	3
MATH:1560	Engineering Mathematics II: Multivariable Calculus	4
GE CLAS Core: World Languages Second Level Proficiency or elective course ^c		4 - 5
Hours		17-19
Second Year		
Fall		
STAT:3200	Applied Linear Regression	3
CS:2230	Computer Science II: Data Structures	4
GE CLAS Core: Diversity and Inclusion ^d		3
GE CLAS Core: Natural Sciences without Lab ^d		3
GE CLAS Core: World Languages Third Level Proficiency or elective course ^c		4 - 5
Hours		17-18
Spring		
CS:3330	Algorithms	3
MATH:2700	Introduction to Linear Algebra	4
GE CLAS Core: International and Global Issues ^d		3

GE CLAS Core: World Languages Fourth Level Proficiency or elective course ^c	4 - 5
Elective course ^e	3
Hours	17-18

Third Year

Fall		
STAT:3100	Introduction to Mathematical Statistics I ^f	3
CS:4400	Database Systems	3
GE CLAS Core: Natural Sciences with Lab ^d		4
GE CLAS Core: Social Sciences ^d		3
Elective course ^e		3

Hours 16

Spring

CS:5430 or STAT:4540	Machine Learning ^g or Statistical Learning	3
STAT:3101	Introduction to Mathematical Statistics II ^h	3
STAT:4580	Data Visualization and Data Technologies ^h	3
GE CLAS Core: Literary, Visual, and Performing Arts ^g		3
Elective course ^e		3

Hours 15

Fourth Year

Fall		
DATA:4880	Data Science Creative Component	1
Major: advanced elective I course ⁱ		3
Major: advanced elective II course ⁱ		3
GE CLAS Core: Historical Perspectives ^d		3
Elective course ^e		3

Hours 13

Spring

DATA:4890	Data Science Practicum	2
Major: advanced elective III course ⁱ		3
GE CLAS Core: Values and Culture ^d		3
Elective course ^e		1
Elective course ^e		3

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j

Hours 12

Total Hours 124-130

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.

b Enrollment in math courses requires completion of a placement exam.

c Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.

d GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.

- e Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
- f Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.
- g Typically STAT:4540 is offered in fall semesters only and CS:5430 is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
- h Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
- i Students should select at least one computer science course and one statistics course for their advanced electives.
- j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.