# Data Science, B.S.

## 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, B.S.

### Course Title and Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH:1550</td>
<td>Engineering Mathematics I: Single Variable Calculus</td>
<td>Fall</td>
<td>4</td>
</tr>
<tr>
<td>RHET:1030</td>
<td>Rhetoric or The Interpretation of Literature</td>
<td></td>
<td>3 - 4</td>
</tr>
<tr>
<td>CS:1210</td>
<td>Computer Science I: Fundamentals</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>World Languages First Level Proficiency or elective course</td>
<td></td>
<td>4 - 5</td>
</tr>
<tr>
<td>CSI:1600</td>
<td>Success at Iowa</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH:1560</td>
<td>Engineering Mathematics II: Multivariable Calculus</td>
<td>Fall</td>
<td>4</td>
</tr>
<tr>
<td>STAT:2010</td>
<td>Statistical Methods and Computing</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CS:2210</td>
<td>Discrete Structures</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ENGL:1200</td>
<td>The Interpretation of Literature or Rhetoric</td>
<td></td>
<td>3 - 4</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>World Languages Second Level Proficiency or elective course</td>
<td></td>
<td>4 - 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH:3200</td>
<td>Applied Linear Regression</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>CS:2230</td>
<td>Computer Science II: Data Structures</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>Natural Sciences without Lab</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>Historical Perspectives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>World Languages Second Level Proficiency or elective course</td>
<td></td>
<td>4 - 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS:3330</td>
<td>Algorithms</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>MATH:2700</td>
<td>Introduction to Linear Algebra</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>International and Global Issues</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>World Languages Fourth Level Proficiency or elective course</td>
<td></td>
<td>4 - 5</td>
</tr>
<tr>
<td>Elective course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT:3100</td>
<td>Introduction to Mathematical Statistics I</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>CS:4400</td>
<td>Database Systems</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>Natural Sciences with Lab</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>Social Sciences</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Elective course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE CLAS Core:</td>
<td>Literacy, Visual, and Performing Arts</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Elective course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major: advanced elective I course</td>
<td></td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>Major: advanced elective II course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>Diversity and Inclusion</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>DATA:4880</td>
<td>Data Science Creative Component</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elective course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major: advanced elective III course</td>
<td></td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core:</td>
<td>Values and Culture</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>DATA:4890</td>
<td>Data Science Practicum</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Elective course</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Elective course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Degree Application

- Major: advanced elective I course
- Major: advanced elective II course
- GE CLAS Core: Diversity and Inclusion
- DATA:4880 Data Science Creative Component
- Elective course
- Elective course
- Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

**Total Hours:** 124-130

---

a. Enrollment in math courses requires completion of a placement exam.
b. Fulfills a major requirement and may fulfill a GE requirement.
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.