Statistics, BS

Academic Plans

Four-Year Graduation Plan

The following checkpoints list the minimum requirements students must complete by certain semesters in order to stay on the university’s Four-Year Graduation Plan. Courses in the major are those required to complete the major; they may be offered by departments other than the major department.

Much of the coursework in statistics is sequential, so students must begin requirements for the major as soon as possible. Individual study plans must be made carefully. Students who first enroll for a spring semester must consult their advisor to confirm a four-year plan.

Courses must be taken in sequence, so students must begin work early.

**Before the fifth semester begins:** at least four courses in the major, including MATH:1850 Calculus I, MATH:1860 Calculus II, and STAT:2010 Statistical Methods and Computing.

**Before the seventh semester begins:** seven or eight courses in the major and at least 90 s.h. earned toward the degree.

**Before the eighth semester begins:** nine or ten courses in the major.

**During the eighth semester:** enrollment in all remaining coursework in the major, all remaining GE CLAS Core courses, and a sufficient number of semester hours to graduate.

Sample Plans 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.

Statistics, BS

Mathematical statistics track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH:2700</td>
<td>Introduction to Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>GE CLAS Core: Diversity and Inclusion</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: World Languages Second Level Proficiency or elective course</td>
<td>4 - 5</td>
<td></td>
</tr>
</tbody>
</table>

*Hours 18-19*

Second Year

**Fall**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>STAT:3100</td>
<td>Introduction to Mathematical Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>RHET:1030 or ENGL:1200</td>
<td>Rhetoric or The Interpretation of Literature</td>
<td>3 - 4</td>
</tr>
<tr>
<td>GE CLAS Core: World Languages Third Level Proficiency or elective course</td>
<td>4 - 5</td>
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</table>

*Hours 13-15*

**Spring**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>STAT:3101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT:3200</td>
<td>Applied Linear Regression</td>
<td>3</td>
</tr>
<tr>
<td>MATH:2850</td>
<td>Calculus III</td>
<td>4</td>
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<tr>
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<td>4 - 5</td>
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*Hours 14-15*

Third Year

**Fall**

<table>
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<tr>
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<th>Title</th>
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</tr>
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<tr>
<td>MATH:3770</td>
<td>Fundamental Properties of Spaces and Functions I</td>
<td>4</td>
</tr>
<tr>
<td>Major: upper-level statistics course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: International and Global Issues</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: Literary, Visual, and Performing Arts</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective course</td>
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<td></td>
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*Hours 16*

**Spring**

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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>STAT:3210</td>
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<td></td>
</tr>
<tr>
<td>BIOS:4510</td>
<td>Data Science Foundations in R</td>
<td>2</td>
</tr>
<tr>
<td>GE CLAS Core: Natural Sciences without Lab</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: Social Sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective course</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*Hours 17*

Fourth Year

**Fall**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major: upper-level statistics course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: Natural Sciences with Lab</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: Values and Culture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective course</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*Hours 16*

**Spring**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major: upper-level statistics course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective course</td>
<td>3</td>
<td></td>
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<td>3</td>
<td></td>
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<td>Elective course</td>
<td>3</td>
<td></td>
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</tbody>
</table>
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

<table>
<thead>
<tr>
<th>Hours</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hours</td>
<td>126-132</td>
</tr>
</tbody>
</table>

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 this course requires completion of a placement exam.

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

d Students who have completed four levels of a single language or two levels of two different languages in high school or college have satisfied the GE CLAS Core World Languages requirement. Students who have completed three levels of a single language may complete a fourth-level course in the same language or may choose an approved World Language and Cultural Exploration course. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course. Contact your academic advisor or CLAS Undergraduate Programs Office with questions concerning the World Languages requirement.

e 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.

f Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.

g Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.

h Students must complete MATH:3770 and 9 s.h. from approved courses for the Mathematical Statistics emphasis track.

i Students who use STAT:4100 and STAT:4101 to satisfy the core requirements may not use those courses to satisfy the track requirement. Typically STAT:4100 is offered in fall semesters only and STAT:4101 is offered in spring only. Check MyUI for course availability since offerings are subject to change.

j 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.

k 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 Degree Services.

### Statistical Computing and Data Science track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE CLAS Core: Sustainability</td>
<td>a</td>
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</tbody>
</table>
Fourth Year

Fall

Major: upper-level statistics course 3
GE CLAS Core: Diversity and Inclusion 3
Elective course 3
Elective course 3
Elective course 3

Hours 15

Spring

Major: upper-level statistics course 3
GE CLAS Core: Values and Culture 3
Elective course 3
Elective course 3
Elective course 3
Elective course 3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

Hours 15

Total Hours 126-132

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Statistics in Business, Industry, Government and Research Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Career</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: Sustainability</td>
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<td>0</td>
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First Year

Fall

CS:1210 Computer Science I: Fundamentals 4
MATH:1850 Calculus I 4
MATH:2700 Introduction to Linear Algebra 4
GE CLAS Core: Diversity and Inclusion 3
GE CLAS Core: World Languages First Level Proficiency or elective course 4 - 5
CSI:1600 Success at Iowa 2

Hours 17-19

Spring

STAT:2010 Statistical Methods and Computing 3
MATH:1860 Calculus II 4
RHET:1030 or ENGL:1200 Rhetoric or The Interpretation of Literature 3 - 4
GE CLAS Core: Historical Perspectives 3
GE CLAS Core: World Languages Second Level Proficiency or elective course 4 - 5

Hours 18-19

Second Year

Fall

STAT:3100 Introduction to Mathematical Statistics I 3
STAT:3200 Applied Linear Regression 3
GE CLAS Core: Natural Sciences with Lab 4
GE CLAS Core: World Languages Third Level Proficiency or elective course 4 - 5

Hours 14-15

Spring

STAT:3101 Introduction to Mathematical Statistics II 3
RHET:1030 or ENGL:1200 Rhetoric or The Interpretation of Literature 3 - 4
GE CLAS Core: Historical Perspectives 3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course 4 - 5

Hours 13-15

Third Year

Fall

MATH:2850 Calculus III 4
GE CLAS Core: International and Global Issues 3
GE CLAS Core: Natural Sciences without Lab 3
Elective course 3

Hours 13

Spring

STAT:3210 Experimental Design and Analysis 3
BIOS:4510 Data Science Foundations in R 2
Major: upper-level statistics course 3

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Notes:
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e Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
f Students must complete five courses for the Statistical Computing and Data Science emphasis track.
g 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.
h Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.
i 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.
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 Degree Services.
GE CLAS Core: Literary, Visual, and Performing Arts 3
GE CLAS Core: Social Sciences 3
Elective course 3

Hours 17

Fourth Year
Fall
Major: upper-level statistics course 3
Elective course 3
Elective course 3
Elective course 3
Elective course 3

Hours 15

Spring
Major: upper-level statistics course 3
GE CLAS Core: Values and Culture 3
Elective course 3
Elective course 3
Elective course 3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

Hours 15

Total Hours 122-128

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h 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.
i Students must complete BIOS:4510 and 9 s.h. from approved courses for the Statistics in Business, Industry, Government and Research emphasis track.

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