

# 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

- Statistics in Business, Industry, Government and Research Track [p. 1]
- Statistical Computing and Data Science Track [p. 2]
- Mathematical Statistics Track [p. 3]

### Statistics in Business, Industry, Government and Research Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		
<b>Hours</b>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
CS:1210	Computer Science I: Fundamentals <sup>b</sup>	4
MATH:1850	Calculus I <sup>c</sup>	4
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	
GE CLAS Core: World Languages First Level		4 - 5
Proficiency or elective course <sup>d</sup>		

CSI:1600	Success at Iowa	2
<b>Hours</b>		<b>17-19</b>

#### Spring

STAT:2010	Statistical Methods and Computing	3
MATH:1860	Calculus II	4
MATH:2700	Introduction to Linear Algebra	4
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
GE CLAS Core: World Languages Second Level		4 - 5
Proficiency or elective course <sup>d</sup>		
<b>Hours</b>		<b>18-19</b>

#### Second Year

##### Fall

STAT:3100	Introduction to Mathematical Statistics I <sup>f</sup>	3
STAT:3200	Applied Linear Regression	3
GE CLAS Core: Natural Sciences with Lab <sup>e</sup>		4
GE CLAS Core: World Languages Third Level		4 - 5
Proficiency or elective course <sup>d</sup>		
<b>Hours</b>		<b>14-15</b>

##### Spring

STAT:3101	Introduction to Mathematical Statistics II <sup>g</sup>	3
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
GE CLAS Core: World Languages Fourth Level		4 - 5
Proficiency or elective course <sup>d</sup>		
<b>Hours</b>		<b>13-15</b>

#### Third Year

##### Fall

STAT:5810	Research Data Management <sup>h</sup>	3
MATH:2850	Calculus III	4
GE CLAS Core: International and Global Issues <sup>e</sup>		3
GE CLAS Core: Natural Sciences without Lab <sup>e</sup>		3
Elective course <sup>i</sup>		3
<b>Hours</b>		<b>16</b>

##### Spring

STAT:3210	Experimental Design and Analysis <sup>g</sup>	3
Major: upper-level statistics course <sup>h</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
GE CLAS Core: Social Sciences <sup>e</sup>		3
Elective course <sup>i</sup>		3
<b>Hours</b>		<b>15</b>

#### Fourth Year

##### Fall

Major: upper-level statistics course <sup>h</sup>		3
Elective course <sup>i</sup>		3
Elective course <sup>i</sup>		3
Elective course <sup>i</sup>		3
Elective course <sup>i</sup>		3
<b>Hours</b>		<b>15</b>

##### Spring

Major: upper-level statistics course <sup>h</sup>		3
GE CLAS Core: Values and Culture <sup>e</sup>		3
Elective course <sup>i</sup>		3

Elective course <sup>i</sup>	3
Elective course <sup>i</sup>	3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>j</sup>	
<b>Hours</b>	<b>15</b>
<b>Total Hours</b>	<b>123-129</b>

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 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.

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 STAT:5810 and 9 s.h. from approved courses for the Statistics in Business, Industry, Government and Research emphasis track.

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 Graduation Services.

## Statistical Computing and Data Science Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		
<b>Hours</b>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
CS:1210	Computer Science I: Fundamentals <sup>b</sup>	4
MATH:1850	Calculus I <sup>c</sup>	4
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	
GE CLAS Core: World Languages First Level		4 - 5
Proficiency or elective course <sup>d</sup>		

CSI:1600	Success at Iowa	2
<b>Hours</b>		<b>17-19</b>

### Spring

STAT:2010	Statistical Methods and Computing	3
MATH:1860	Calculus II	4
MATH:2700	Introduction to Linear Algebra	4
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
GE CLAS Core: World Languages Second Level		4 - 5
Proficiency or elective course <sup>d</sup>		
<b>Hours</b>		<b>18-19</b>

### Second Year

#### Fall

STAT:3200	Applied Linear Regression	3
CS:2210	Discrete Structures <sup>f</sup>	3
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
GE CLAS Core: Natural Sciences without Lab <sup>e</sup>		3
GE CLAS Core: World Languages Third Level		4 - 5
Proficiency or elective course <sup>d</sup>		
<b>Hours</b>		<b>16-17</b>

#### Spring

CS:2230	Computer Science II: Data Structures <sup>f</sup>	4
ENGL:1200	The Interpretation of Literature	3 - 4
or RHET:1030	or Rhetoric	
GE CLAS Core: Natural Sciences with Lab <sup>e</sup>		4
GE CLAS Core: World Languages Fourth Level		4 - 5
Proficiency or elective course <sup>d</sup>		
<b>Hours</b>		<b>15-17</b>

### Third Year

#### Fall

STAT:3100	Introduction to Mathematical Statistics I <sup>g</sup>	3
MATH:2850	Calculus III	4
GE CLAS Core: International and Global Issues <sup>e</sup>		3
GE CLAS Core: Social Sciences <sup>e</sup>		3
Elective course <sup>h</sup>		3
<b>Hours</b>		<b>16</b>

#### Spring

STAT:3101	Introduction to Mathematical Statistics II <sup>i</sup>	3
STAT:3210	Experimental Design and Analysis <sup>i</sup>	3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
Elective course <sup>h</sup>		3
Elective course <sup>h</sup>		3
<b>Hours</b>		<b>15</b>

### Fourth Year

#### Fall

STAT:5810	Research Data Management <sup>f</sup>	3
Major: upper-level statistics course <sup>f</sup>		3
Elective course <sup>h</sup>		3
Elective course <sup>h</sup>		3
Elective course <sup>h</sup>		3
<b>Hours</b>		<b>15</b>

#### Spring

Major: upper-level statistics course <sup>f</sup>		3
GE CLAS Core: Values and Culture <sup>e</sup>		3
Elective course <sup>h</sup>		3

Elective course <sup>h</sup>	3
Elective course <sup>h</sup>	3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>j</sup>	
<b>Hours</b>	<b>15</b>
<b>Total Hours</b>	<b>127-133</b>

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 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.

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 Students must complete five courses for the Statistical Computing and Data Science emphasis track.

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

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

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.

## Mathematical Statistics Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		
<b>Hours</b>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
CS:1210	Computer Science I: Fundamentals <sup>b</sup>	4
MATH:1850	Calculus I <sup>c</sup>	4
RHET:1030	Rhetoric	3 - 4
	or ENGL:1200 or The Interpretation of Literature	
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>d</sup>		4 - 5
CSI:1600	Success at Iowa	2
<b>Hours</b>		<b>17-19</b>

## Spring

STAT:2010	Statistical Methods and Computing	3
MATH:1860	Calculus II	4
MATH:2700	Introduction to Linear Algebra	4
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>d</sup>		4 - 5
<b>Hours</b>		<b>18-19</b>

## Second Year

### Fall

STAT:3100	Introduction to Mathematical Statistics I <sup>f</sup>	3
ENGL:1200	The Interpretation of Literature	3 - 4
	or RHET:1030 or Rhetoric	
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
GE CLAS Core: World Languages Third Level Proficiency or elective course <sup>d</sup>		4 - 5
<b>Hours</b>		<b>13-15</b>

### Spring

STAT:3101	Introduction to Mathematical Statistics II <sup>g</sup>	3
STAT:3200	Applied Linear Regression	3
MATH:2850	Calculus III	4
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>d</sup>		4 - 5
<b>Hours</b>		<b>14-15</b>

## Third Year

### Fall

MATH:3770	Fundamental Properties of Spaces and Functions I <sup>h</sup>	4
Major: upper-level statistics course <sup>h, i</sup>		3
GE CLAS Core: International and Global Issues <sup>e</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3

Elective course <sup>j</sup>		3
<b>Hours</b>		<b>16</b>

### Spring

STAT:3210	Experimental Design and Analysis <sup>g</sup>	3
GE CLAS Core: Natural Sciences without Lab <sup>e</sup>		3
GE CLAS Core: Social Sciences <sup>e</sup>		3
Elective course <sup>j</sup>		3
Elective course <sup>j</sup>		3
<b>Hours</b>		<b>15</b>

## Fourth Year

### Fall

Major: upper-level statistics course <sup>h, i</sup>		3
GE CLAS Core: Natural Sciences with Lab <sup>e</sup>		4
GE CLAS Core: Values and Culture <sup>e</sup>		3
Elective course <sup>j</sup>		3
Elective course <sup>j</sup>		3
<b>Hours</b>		<b>16</b>

### Spring

Major: upper-level statistics course <sup>h, i</sup>		3
Elective course <sup>j</sup>		3
Elective course <sup>j</sup>		3
Elective course <sup>j</sup>		3
Elective course <sup>j</sup>		3

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

<b>Hours</b>	<b>15</b>
<b>Total Hours</b>	<b>124-130</b>

- 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 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.
- 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 Graduation Services.