

# Statistics, PhD

## Academic 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.

## Statistics, PhD

### Data Science Concentration

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		

76 s.h. must be graduate level coursework; graduate transfer credits allowed upon approval. More information is included in the General Catalog and on department website. <sup>a</sup>

Hours		0
<b>First Year</b>		
<b>Fall</b>		
STAT:5090	ALPHA Seminar	1
STAT:5100	Statistical Inference I	3
STAT:5200	Applied Statistics I	4
STAT:5400	Computing in Statistics	3
<b>Hours</b>		<b>11</b>
<b>Spring</b>		
STAT:5101	Statistical Inference II	3
STAT:5120	Mathematical Methods for Statistics	3
STAT:5201	Applied Statistics II	3
<b>Hours</b>		<b>9</b>
<b>Second Year</b>		
<b>Fall</b>		
Written Exam <sup>b</sup>		
Creative Component <sup>c, d</sup>		
STAT:6300	Probability and Stochastic Processes I	3
STAT:6990	Readings in Statistics <sup>e</sup>	1
STAT:7100	Advanced Inference I	3
STAT:7200	Linear Models	4
<b>Hours</b>		<b>11</b>
<b>Spring</b>		
Present Creative Component <sup>f</sup>		
STAT:4580	Data Visualization and Data Technologies	3
STAT:6220	Consulting and Communication with Data	3
STAT:6990	Readings in Statistics <sup>e</sup>	1
STAT:7400	Computer Intensive Statistics	3
<b>Hours</b>		<b>10</b>

### Third Year Any Semester

Identify dissertation advisor, dissertation topic, and dissertation committee

Hours		0
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#### Fall

Exam: Doctoral Comprehensive Exam <sup>g</sup>		
DATA:4540	Statistical Learning	3
STAT:7990	Reading Research <sup>h</sup>	4
Concentration Area course <sup>i</sup>		3

Hours		10
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#### Spring

DATA:7350	High-Dimensional Probability for Data Science	3
STAT:7290	Seminar: Applied Statistics	2
or STAT:7390	or Seminar: Probability	
or STAT:7190	or Seminar: Mathematical Statistics	
STAT:7500	Statistical Machine Learning	3
STAT:7990	Reading Research <sup>h</sup>	2

Hours		10
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### Fourth Year

#### Fall

STAT:7990	Reading Research <sup>h</sup>	3
Concentration Area course <sup>i</sup>		3

Hours		6
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#### Spring

Prospectus Defense <sup>j</sup>		
STAT:7990	Reading Research <sup>h</sup>	3

Hours		3
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### Fifth Year

#### Fall

STAT:7990	Reading Research <sup>h</sup>	3
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Hours		3
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#### Spring

STAT:7990	Reading Research <sup>h</sup>	3
Exam: Doctoral Final Exam <sup>k</sup>		

Hours		3
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Total Hours		76
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- a Students must complete specific requirements in the University of Iowa Graduate College after program admission. Refer to the Graduate College website and the Manual of Rules and Regulations for more information.
- b Written two-part exam to fulfill the master's final exam requirement; taken prior to start of second year fall semester classes.
- c Satisfactorily complete the creative component requirement draft by the end of the semester.
- d Students must complete a creative component that is related to their application and career interests. It entails writing an 8-15 page report on a suitable topic, under an advisor's supervision with two consecutive 1 s.h. enrollments in STAT:6990, normally during the fall and spring semesters of the second year.
- e Two consecutive enrollments are required.
- f The creative component requirement must be completed and presented by mid-spring; the paper is then presented orally in a public seminar.
- g Typically completed at the beginning of the third year, the comprehensive examination consists of both written

and oral components in two of the following four areas: statistical inference, linear models, probability, and statistical computing. See the General Catalog and the department website for specifics.

- h Students must complete at least 18 s.h. of Reading Research credit.
- i Students must complete a minimum of two courses (6 s.h.) with at least one numbered 7000 or above; see the General Catalog for list of approved courses. Work with faculty advisor to determine appropriate coursework and sequence.
- j Within 18 months of passing the comprehensive exam, students typically present a written and oral prospectus to their PhD committee. See the General Catalog and department website for specifics.
- k Dissertation defense.