Illinois State University
Department of Mathematics
Statistics Sequence

This sequence of the major is designed to prepare students for statistical work in industry and government. In addition to learning the mathematical foundation in statistics, the students will get experience in at least two cognate areas of application of statistics for Biometrics, Econometrics, and Psychometrics. This will allow the students to experience many fields of statistical applications and select a field of their choice for a career.

Major Requirements

Required Courses

MAT 145 Calculus I (4 hours)
MAT 146 Calculus II (4 hours)
MAT 147 Calculus III (4 hours)
MAT 175 Elementary Linear Algebra (4 hours)
MAT 260 Discrete Mathematics (4 hours)
MAT 350 Applied Probability Models (4 hours)
MAT 351 Statistics and Data Analysis (4 hours)

At least two courses from the following:

MAT 353 The Analysis of Time Series (4hours)
MAT 356 Statistical Computing (4 hours)
MAT 450 Finite Sampling (4 hours)
MAT 453 Regression Analysis (4 hours)
MAT 455 Applied Stochastic Processes (4 hours)
MAT 456 Multivariate Statistics (3-4 hours)
MAT 458 The Design of Experiments (3-4 hours)

(Note: Only seniors with good standing will be allowed to take a graduate-level course, those courses numbers 400 or higher, provided the Graduate School gives approval.)

One computer programming course: ITK 155.01 or ITK 155.02

At least two courses from at least two of the following approved areas:

Biological Sciences: BSC 201, BSC 203, BSC 219, BSC 297, BSC 321
Economics: ECO 225, ECO 235, ECO 238, ECO 239, ECO 240, ECO 241, ECO 320, ECO 331, ECO 339
Psychology: PSY 230, PSY 231, PSY 233, PSY 331, PSY 334

Note: It is to the advantage of the student to have a minor or double major in one of the above areas, but this is NOT a requirement of the sequence. Seniors in good standing are encouraged to take upper-level applied statistics course from cognate areas.

Contact Dr. George Seelinger, Department chair, for more information.
Mathematics Department
Campus Box 4520
Normal, IL 61790-4520 mathchair@ilstu.edu

Statistics Sequence--Sample Four-Year Plans

Cognate Areas : Biometrics and Econometrics

Year 1

Fall	**Spring**
ENG 101 or COM 110	MAT 146
MAT 145	ECO 105
General Education,	BSC 196
Inner Core	COM 110 or ENG 101

Year 2

Fall	**Spring**
MAT 147	MAT 175
MAT 260	MAT 350
BSC 197	ECO 225
ITK 155.02 or 155.01	

Year 3

Fall	**Spring**
MAT 351	STAT Elective*
ECO 331	ECO 238
BSC 201	ST**

Year 4

Fall	**Spring**
STAT Elective*	STAT Elective*
BSC 219	ST**

Cognate Areas : Biometrics and Psychometrics

Year 1

Fall	**Spring**
ENG 101 or COM 110	MAT 146
MAT 145	PSY 110
General Education,	BSC 196
Inner Core	COM 110 or ENG 101

Year 2

Fall	**Spring**
MAT 147	MAT 175
MAT 260	MAT 350
BSC 197	PSY 230
ITK 155.02 or 155.01	

Year 3

Fall	**Spring**
MAT 351	STAT Elective*
PSY 231	PSY 331
BSC 201	ST**

Year 4

Fall	**Spring**
STAT Elective*	STAT Elective*
BSC 219	ST**

*Must elect at least two courses from the following list: MAT 353, MAT 356, MAT 450, MAT 453, MAT 455, MAT 456, MAT 458.

**May elect an upper level applied statistics course from one of the cognate areas.

Hidden Prerequisites: Note that BSC 196, BSC 197, ECO 105, and PSY 110 are prerequisites for the upper level courses from the respective cognate areas. ECO 138 is a prerequisite for most Economics courses. A mathematical Statistics course may be substituted for this requirement.

Students must satisfy a foreign language requirement that may be met by: 3 years of a single foreign language in high school or completion of the second semester or higher of college-level foreign language (LAN 112 or articulated course) with a grade of "C" or better or equivalent proficiency as determined by examination. American Sign Language may be used to fulfill this requirement by transfer credit or by proficiency. If needed, foreign language classes should be added to the above schedule.

Graduation Requirements: Complete a minimum of 120 hours; complete the General Education requirements; complete at least 42 senior level hours; complete residency and language requirements; complete a global studies course; maintain a GPA of 2.0 in Mathematics; maintain a GPA of 2.0 overall; and complete a senior portfolio. **For complete, official information, consult your catalog.**