Statistics

Nature of Program
A minor in statistics is available to all University students with the option of either an applied statistics track or a mathematical statistics track. Students interested in a major related to statistics should consider the interdepartmental bachelor of sciences degree in industrial mathematics and statistics.

FACULTY
CHAIR
• Michael Mays - Ph.D. (Penn State University)

PROFESSORS
• Erdogan Gunel - Ph.D. (SUNY-Buffalo)
  Bayesian inference, Biostatistics, Categorical data analysis
• E. James Harner - Ph.D. (Cornell U.)
  Bioinformatics, Statistical computing, Statistical modeling, Statistical learning
• Robert Mnatsakanov - Ph.D. (Moscow Stat Institute of Electronics and Mathematics)
  Nonparametric statistics, Statistical Inverse Problems, Mixture Models, Change-set Problems

ASSOCIATE PROFESSORS
• Mark V. Culp - Ph.D. (University of Michigan)
  Statistical Machine Learning, Computational Statistics, Semi-supervised and Multi-view Learning
• Gerald R. Hobbs Jr. - Ph.D. (Kansas St. U.)
  Biostatistics, Nonparametric statistics, Regression analysis
• Huey Miin Lee - Ph.D. (Johns Hopkins U.)
  Bioinformatics, Operations research, Statistical education
• Kenneth J. Ryan - Ph.D. (Iowa State University)
  Experimental Design, Statistical Machine Learning, Biolmetrics

ASSISTANT PROFESSORS
• Stacey Culp - Ph.D. (University of Michigan)
  Statistics Education, Statistical Consulting
• Casey Jelsema - Ph.D. (Western Michigan U.)
  Spatial Statistics, Mixed Effects Models, Bayesian hierarchical modeling, constrained inference, bootstrap methods, environmental statistics, microbiome, statistical computation
• Erin Leatherman - Ph.D. (Ohio State)
  Prediction and Design for Computer and Physical Experiments

TEACHING INSTRUCTOR
• Anthony Billings - M.S. (WVU); A.B.D. (CMU)
  Statistical computing, Statistical modeling, Robust estimation, Nonlinear dynamic systems, Statistical education

PROFESSOR EMERITUS
• William V. Thayne - Ph.D. (University of Illinois)
  Experimental Design, Statistical Genetics, Regression Analysis
• Edwin C. Townsend - Ph.D. (Cornell University)
  Experimental Design, Regression Analysis

ASSOCIATE PROFESSOR EMERITUS
• Daniel M. Chilko - M.S. (Rutgers University)
  Statistical Computing, Computer Graphics
Major Learning Goals

STATISTICS

Undergraduate courses in statistics, and sequences of statistics courses leading to a minor in statistics or a major in Industrial Mathematics and Statistics, provide a foundation of statistical literacy, statistical reasoning, and statistical thinking. Our aim is for all of our students to be challenged and encouraged in their statistical course work. In particular, we enable our students to:

- Appreciate the inherent variation and uncertainty of information, and understand that statistics can be a resource for improved decision making;
- Develop critical thinking skills for application of statistics in novel situations;
- Effectively communicate the results of statistical analysis;
- Become responsible and competent practitioners of statistics in order to attain personal goals, either in a profession or in further educational experiences.

STATISTICS MINOR

MINOR CODE - U034

The Statistics minor requires 15 hours not counted toward another minor.

Minimum grade of C- is required in all courses applied toward the minor.

### Core Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>STAT 211</td>
<td>Elementary Statistical Inference</td>
</tr>
<tr>
<td>or STAT 215</td>
<td>Introduction to Probability and Statistics</td>
</tr>
<tr>
<td>or ECON 225</td>
<td>Elementary Business and Economics Statistics</td>
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### Upper-Division Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>One STAT course numbered 200 or above or one MATH course numbered 126 or above</td>
<td></td>
</tr>
<tr>
<td>Select 9 STAT credits numbered 300 or above</td>
<td></td>
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Total Hours: 15