INTENDED FOR: Students considering employment in areas of statistics. Students pursuing a concentration or minor in statistics.

OBJECTIVES: To gain knowledge for designing experiments and to learn the appropriate methods for analyzing the data collected from such experiments.

PREREQUISITES: At least one course in inferential statistics with a “C” of better (MATH 155, 213 or equivalent). MATH 313 or 314 is also preferred.

TECHNOLOGY: THIS COURSE IS COMPUTER DEPENDENT. MINITAB or SPSS will be used throughout the course.


<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&amp;2</td>
<td>Introduction &amp; Simple Comparative Experiments</td>
<td>1.0</td>
</tr>
<tr>
<td>3</td>
<td>Single Factor Designs &amp; ANOVA</td>
<td>3.5</td>
</tr>
<tr>
<td>4</td>
<td>Randomized Blocks &amp; Latin Squares</td>
<td>1.5</td>
</tr>
<tr>
<td>5&amp;6</td>
<td>Factorial Designs</td>
<td>3.0</td>
</tr>
<tr>
<td>14</td>
<td>Nested and Split-Plot Designs</td>
<td>1.5</td>
</tr>
<tr>
<td>13</td>
<td>Experiments with Random Factors</td>
<td>1.0</td>
</tr>
<tr>
<td>Optional Topics</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Fractional Factorial Designs, Response Surface Methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14.0</td>
</tr>
</tbody>
</table>

EVALUATION

Homework, Quizzes, Boardwork, Projects 25%
Tests 50%
Final 25%

Writing Across the Curriculum

Writing will be a large component of this course. All data analyses must be accompanied by clearly written interpretations and conclusions.

The problem sets/projects will require graduate students to exhibit integrative thinking, synthesis, and analysis on material beyond the level usually expected of undergraduates.