ST. JOHN'S UNIVERSITY
NEW YORK

THE PETER J. TOBIN GRADUATE COLLEGE OF BUSINESS
School of Risk Management, Insurance and Actuarial Science

SYLLABUS

Course Name: Applied Statistics
Course Number: ACT 4349
Date: Fall 2014
Dr. Ping Wang
DEPARTMENT: Risk Management, Insurance and Actuarial Science

COURSE NAME: Applied Statistics

COURSE NUMBER: ACT 4349

COURSE DESCRIPTION:
This course provides the theoretical foundations of regression analysis and time series; incorporates examples and problems to link the theory with real-life applications, and allows students hands-on opportunity to perform statistical analysis.

PREREQUISITE:
ACT 3322 and ACT 3333

CREDIT:
3 credit hours

COURSE OBJECTIVES:
After finishing this course, students are expected to
1) Understand basic theory of regression analysis and time series;
2) Be able to analyze real-life phenomena using statistic theory and computation techniques;
3) Earn Validation by Educational Experience (VEE) credit for the topic Applied Statistical Methods required by SOA/CAS preliminary education program. The course has been accredited by SOA.
Students must receive a B minus or better grade for that goal.

METHOD OF INSTRUCTION
Lecture and discussion, homework and lab practice.
## COURSE SCHEDULE

<table>
<thead>
<tr>
<th>Weeks</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>1</td>
<td>Overview of mathematical statistics</td>
</tr>
<tr>
<td>2-3</td>
<td>Basic linear regression</td>
</tr>
<tr>
<td>4-6</td>
<td>Multiple regression</td>
</tr>
<tr>
<td>7</td>
<td>Categorical Explanatory Variables</td>
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<tr>
<td>8</td>
<td>Modeling Trends</td>
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<tr>
<td>9-10</td>
<td>Autocorrelations and Autoregressive Models</td>
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<tr>
<td>11-12</td>
<td>Forecasting and Time Series Models</td>
</tr>
<tr>
<td>13</td>
<td>Categorical Dependent Variables</td>
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## SUGGESTED STUDENT PERFORMANCE EVALUATION

### ASSESSMENT

Student performance will be assessed on homework, quizzes, projects and exams.

All examinations and quizzes are closed book and closed notes.

## SUGGESTED TEXTS:

<table>
<thead>
<tr>
<th>Title</th>
<th>Regression Modeling with Actuarial and Financial Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>Edward W Frees</td>
</tr>
<tr>
<td>Publisher</td>
<td>Cambridge University Press</td>
</tr>
<tr>
<td>Date</td>
<td>2009</td>
</tr>
<tr>
<td>ISBN</td>
<td>978-0-521-76011-9 (Hardback)</td>
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