COURSE DESCRIPTION

Data Analysis and Decision Making helps business graduate students at Rutgers reason quantitatively and use mathematical and software tools for the analysis of data that can enable them to improve their decision abilities during their career. This course helps participating students increase their familiarity with the applications of advanced mathematical concepts typically found in business related disciplines such as Business Management, Microeconomics, Finance, Marketing Research and Accounting among many others. The course is intended to improve the capacity for thinking critically and creatively about quantitative and qualitative problems involving data.

COURSE MATERIALS

Business Analytics: Data Analysis & Decision Making, 5th Edition
With Data Sets Printed Access Card.
S. Christian Albright Indiana University, School of Business
Wayne L. Winston Indiana University, Kelley School of Business (Emeritus)
ISBN-10: 1133629601
1008 Pages Hardcover
© 2015 | Published

- Check Blackboard (blackboard.rutgers.edu) and your official Rutgers email account regularly.

LEARNING GOALS AND OBJECTIVES
1. Identify and apply important quantitative methods developed in the fields of statistics and optimization that are commonly used to solve business related problems.
2. Perform skilled statistical data analysis, summarization and interpretation of datasets by use of analytical software.
4. Utilize mathematical and software advances to build your own models for forecasting and optimization of data.
5. Have a collection of written resources on quantitative methods that will help you successfully meet a broad range of challenges you may encounter in a business career.

PREQUISITES
1. Basic undergraduate statistic courses with a grade of B or better, or Statistics for Managers (22:135:572)
2. Calculus-I with a grade of B or better, or Calculus for Managers (22:135:571)
CLASS ORGANIZATION & ADMINISTRATION

ATTENDANCE AND PREPARATION POLICY

- Expect me to attend all class sessions. I expect the same of you. If I am to be absent, my department chair or I will send you notice via email and Blackboard as far in advance as possible. If you are to be absent, report your absence in advance at https://sims.rutgers.edu/ssra/. If your absence is due to religious observance, a Rutgers-approved activity, illness, or family emergency/death and you seek makeup work, also send me an email with full details and supporting documentation within 5 days of your first absence.

- For weather emergencies, consult the campus home page. Class will be held, if the campus is open, and in accordance with local weather conditions and related safety to commute to class.

- Expect me to prepare properly for each class session. I expect the same of you. Complete all background reading and assignments. You cannot learn if you are not prepared. The minimum expectation is that for each 3 hour class session, you have prepared by studying for at least twice as many hours.

- Expect me to participate fully in each class session. I expect the same of you. Stay focused and involved. You cannot learn if you are not paying attention.

FINAL GRADE ASSIGNMENT

There are 2 exams and a Project in this course:

<table>
<thead>
<tr>
<th>Component</th>
<th>% of Overall Grade</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>34</td>
<td>(Tentative) 10/11/2014</td>
</tr>
<tr>
<td>Final Exam</td>
<td>34</td>
<td>(Tentative) 12/06/2014</td>
</tr>
<tr>
<td>Course Project</td>
<td>32</td>
<td>(Tentative) 11/19/2014</td>
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</table>

Course grades are determined as follows:
- Extra credit: None
- Grade distribution: Letter grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Overall Score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>[&lt; 51]</td>
<td>F</td>
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<tr>
<td>[51-70.99]</td>
<td>D</td>
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<tr>
<td>[71-75.99]</td>
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<td>[76-80.99]</td>
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<td>B+</td>
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<tr>
<td>[91-100]</td>
<td>A</td>
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- Grade posting: Blackboard

- Grade grubbing: “Your final grade is not subject to negotiation. If you feel I have made an error, submit your written argument to me within one week of receiving your final grade. Clarify the precise error I made and provide all due supporting documentation. If I have made an error, I will gladly correct it. But I will adjust grades only if I have made an error. I cannot and will not adjust grades based on consequences, such as hurt pride, lost scholarships, lost tuition reimbursement, lost job opportunities, or dismissals. Do not ask me to do so. It is dishonest to attempt to influence faculty in an effort to obtain a grade that you did not earn, and it will not work.”

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Data Analysis (22:960:575)

COURSE SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>1/24/2015</td>
<td>Introduction to Data Analysis &amp; Decision Making</td>
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<tr>
<td>Week 2</td>
<td>1/31/2014</td>
<td>2. Describing the Distribution of a Single Variable</td>
<td>Chapter 2 Homework 1</td>
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<tr>
<td>Week 3</td>
<td>2/07/2014</td>
<td>3. Finding Relationships among Variables</td>
<td>Chapter 3 Homework 2</td>
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<tr>
<td>Week 4</td>
<td>2/14/2014</td>
<td>4. Probability and Probability Distributions</td>
<td>Chapter 4 Homework 3</td>
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<tr>
<td>Week 5</td>
<td>2/21/2014</td>
<td>5. Normal, Binomial, Poisson, and Exponential</td>
<td>Chapter 5 Homework 4</td>
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<tr>
<td></td>
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<td>Distributions</td>
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<tr>
<td>Week 6</td>
<td>2/28/2014</td>
<td>6. Decision Making under Uncertainty</td>
<td>Chapter 6 Homework 5</td>
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<td>Week 7</td>
<td>3/7/2014</td>
<td>MID TERM</td>
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<td>Week 8,9</td>
<td>3/14/2014</td>
<td>SPRING BREAK</td>
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<td>3/21/2014</td>
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<tr>
<td>Week 10</td>
<td>3/28/2014</td>
<td>8. Confidence Interval Estimation</td>
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<tr>
<td>Week 13</td>
<td>4/18/2014</td>
<td>12. Times Series Analysis and Forecasting</td>
<td>Chapter 10,11 Homework 8</td>
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<td>Week 13</td>
<td>4/25/2014</td>
<td>Course Project</td>
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<td>Week 14</td>
<td>5/2/2014</td>
<td>FINAL</td>
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ACADEMIC INTEGRITY

I do NOT tolerate cheating. Students are responsible for understanding the RU Academic Integrity Policy (http://academicintegrity.rutgers.edu/files/documents/AI_Policy_2013.pdf). I will strongly enforce this Policy and pursue all violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, “On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment.” [I will screen all written assignments through SafeAssign or Turnitin, plagiarism detection services that compare the work against a large database of past work.] Don’t let cheating destroy your hard-earned opportunity to learn. See business.rutgers.edu/ai for more details.
SUPPORT SERVICES

If you are a military *veteran* or are on active military duty, you can obtain support through the Office of Veteran and Military Programs and Services. http://veterans.rutgers.edu/

If you are in need of *mental health* services, please use our readily available services.
[Rutgers University-Newark Counseling Center: http://counseling.newark.rutgers.edu/]
[Rutgers Counseling and Psychological Services – New Brunswick: http://rhscaps.rutgers.edu/]

If you are in need of *physical health* services, please use our readily available services.
[Rutgers Health Services – Newark: http://health.newark.rutgers.edu/]
[Rutgers Health Services – New Brunswick: http://health.rutgers.edu/]

If you are in need of *legal* services, please use our readily available services: http://rusls.rutgers.edu/