BUAN 3210-01: Data Communication  
(Introduction to Business Analytics)  
Spring 2019, Tues & Thurs 3:45-5:50, Pigott 103

PROFESSOR: Dr. Gareth Green  
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Office Hours: Tues, Wed and Thurs, 11:00 AM – noon

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DESCRIPTION: Business Analytics is a combination of statistics and computing (i.e. data science) applied to topics in business. The increase in data gathering capabilities and computing power have greatly enhanced the use of data to understand the behavior and activity of consumers and producers. To be successful, one must understand a broad range of analysis procedures and computing tools to address the wide variety of data science applications to business. The goals for this course are to develop communication strategies for analysis results, learn the theory and application of data visualization, and learn a statistical programming language (R/RStudio). Communication is a core element of this course—analysis is nearly useless if it cannot be clearly communicated. We will use tools and processes to create and communicate reproducible research; from downloading, exploring and analyzing data, summarizing findings, creating professional visualizations, to developing communications (written and oral) that tell stories from the data.

EXPECTATIONS: Treat classmates with respect, complete reading prior to class, and bring questions to class. If you do not understand something in the text or on an assignment, ask about it. The best way to learn is to work through questions.

REQUIRED: These texts cover the technical skills that will be required to complete the course. 

MATERIALS: Lecture materials, homework sets and solutions, project assignments and other materials will be made available at: http://seattleu.instructure.com

SCHEDULE: The tentative course schedule with topics, readings, and project due dates are given in a separate handout.

ATTENDANCE: Attendance is not mandatory but will determine any participation activity points that become available and is critical to understanding the material – don’t miss class.

PARTICIPATION ACTIVITIES: There will be 10+/- short group assignments that may contain analysis, graphing, and communication worth 2 to 5 points each. These assignments will generally be initiated in class. There will be significant discussion during these activities. You are encouraged work in groups of two and switch up who you work with.
QUICK PROJECTS: There will be two short projects worth 30 points each. Students will be given a data set and required to complete and submit a short project; each will contain analysis, graphing, and communication. One will be on an individual project and the other will be groups of two.

MID/FINAL PROJECTS: There are two individual take-home project assignments that will be covered in separate handouts. The goal of these projects is to develop deeper understanding of the course material by applying them to detail oriented projects. One will be on a group and the other will be an individual project.

PRESENTATIONS: There will be two presentations, one associated with a quick project and the other associated with the Final Project. Details provided in separate handouts.

GRADING: Letter grades will not be assigned to individual homework or project assignments (but relative class standings will be indicated for each exam). A final grade will be assigned at the end of the term based on the student's total points and relative standing in class. A tentative grading schedule is below. Note that +/- grades are 3% from the range given below:

<table>
<thead>
<tr>
<th>Range</th>
<th>Points</th>
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<tbody>
<tr>
<td>A range</td>
<td>90-100% of total points (A- 90-93%)</td>
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<tr>
<td>B range</td>
<td>80-89.9% of total points (B- 80-83%, B+ 87-89.9%)</td>
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<tr>
<td>C range</td>
<td>70-79.9% of total points (C- 70-73%, B+ 77-79.9%)</td>
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<tr>
<td>D range</td>
<td>60-69.9% of total points (D- 60-63%, D+ 67-69.9%)</td>
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<tr>
<td>F range</td>
<td>less than 59.9% of total points</td>
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This grading schedule is subject to change during the course of the quarter based on the overall performance of the class, but it will NOT be made more difficult.

Grades will be based on the following assignment points:

- 10 +/- Participation Activities (2 to 5 points each, 30 +/- points total)
- 2  Quick Projects (25 points each, 50 points total)
- 1  Mid-term Project (50 points)
- 1  Final Project (70 points)
- 200 +/- Total assigned points

OUTLINE: A more detailed schedule with reading and assignments is given in a separate handout.

Section I: Introduction
1. R/RStudio
2. Workflow, RMarkdown
3. Communication and Visualization
4. Exploratory Data Analysis (EDA)
5. ggplot2

Section II: Comprehensive EDA
1. Tidyverse and Data Wrangling
2. Tables and Visualization
3. Programming
4. Statistics and models
5. Getting Data

Section III: Communication
1. Specialty Visuals
2. Refining Visuals
3. Storytelling with Data
4. Interactive Visuals
5. Dashboards
6. Power BI
ELECTRONIC DEVICES: The use of laptops, netbooks or PDAs in class to take class-notes, view PowerPoints or work on class projects is encouraged. However, please do not use laptops, netbooks or PDAs (cellphones, hand-helds) in class for any non-class related activity (including instant messaging, web-browsing, etc.) unless specifically suggested by the instructor.

ACADEMIC RESOURCES:
- Library and Learning Commons (http://www.seattleu.edu/learningcommons/)
  (This includes: Learning Assistance Programs, Research [Library] Services, Writing Center, Math Lab)
- Academic Integrity Tutorial (found on Canvas and SU Online)

ACADEMIC POLICIES ON REGISTRAR WEBSITE:
- https://www.seattleu.edu/redhawk-axis/academic-policies/
- Academic Integrity Policy
- Academic Grading Grievance Policy
- Professional Conduct Policy (only for those professional programs to which it applies)

NOTICE FOR STUDENTS CONCERNING DISABILITIES: If you have, or think you may have, a disability (including an ‘invisible disability’ such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your performance as a student in this class, you are encouraged to arrange support services and/or accommodations through Disabilities Services staff located in Loyola 100, (206) 296-5740. Disability-based adjustments to course expectations can be arranged only through this process.

OFFICE OF INSTITUTIONAL EQUITY: Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in educational programs or activities that receive Federal financial assistance. This prohibition includes sexual misconduct, which encompasses sexual harassment and sexual violence. Seattle U remains committed to providing a safe and equitable learning, living, and working environment. Seattle U offers emergency, medical, and other support resources, as well as assistance with safety and support measures, to community members who have experienced or been impacted by sexual misconduct.

Seattle U requires all faculty and staff to notify the University’s Title IX Coordinator if they become aware of any incident of sexual misconduct experienced by a student.

For more information, please visit https://www.seattleu.edu/equity/. If you have any questions or concerns, you may also directly contact the Title IX Coordinator in the Office of Institutional Equity (email: oie@seattleu.edu; phone: 206.296.2824) University Resources and Policies