

# PLSC 331 Interpreting Research Findings

## 1 credit hour

Instructor: Dr. Brandon Horvath

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Canvas Site: Listed as- 'PLSC 331: Interpreting Research Findings'

Course description: Learn the various tools for interpreting research data and gain an appreciation of how to better understand data that is presented at meetings and conferences of importance and form an informed opinion about results.

General Course objectives: After completing PLSC 331, the student will be able to:

1. Understand and be able to discuss how basic statistics can be used to spread BS or mislead the audience.
2. Analyze a data visualization and evaluate how the product is misleading or biased.
3. Apply the understanding of how data, statistics and visualizations can be improperly used to assess a new scenario and identify the potential areas where information is not being used appropriately.
4. Discuss the importance of data and research integrity in the context of the whole of agricultural research in specific, and scientific research in general.

Course schedule: CRN 24835: M- In Class, W-virtual/assignment period

CRN 33782 M- virtual/assignment period, W- In Class

**IT IS IMPERATIVE AND REQUIRED THAT YOU ATTEND CLASS IN YOUR SCHEDULED PERIOD; if you attend a different class period than your own, I will dismiss you from class.**

**Covid-19 Related Information:** Students are required to wear face masks at all times and maintain social distancing (6 feet between individuals in traditional classrooms, or, in instructional laboratories and similar settings, only a few minutes in closer proximity when absolutely necessary to achieve learning objectives).

**Students who are feeling ill or experiencing symptoms such as sneezing, coughing, or a higher than normal temperature will be excused from class and should stay at home.** Instructors have the right to ask those who are not complying with these requirements to leave class in the interest of everyone's health and safety. In the event that a student refuses to comply with these requirements, the instructor has

the right to cancel class. Additionally, following other simple practices will promote good health in and out of the classroom, such as frequent and thorough hand washing, wiping down desks and seats with disinfectant wipes whenever possible, not sharing personal items such as pens and cell phones, and avoiding crowded hallways and other enclosed spaces.

The Volunteer Creed reminds us that we bear the torch in order to give light to others. As Volunteers, we commit to caring for one another and for the members of the communities in which we live, work, and learn. This semester, the University asks that we all demonstrate the Volunteer spirit by following these and other health guidelines and requirements.

**We will display flexibility when it comes to situations associated with COVID-19 related issues, and will adjust as needed. I encourage you all to not take advantage of this flexibility, and also to take your responsibilities seriously.**

**Grading scale:** I have been intrigued by how prevalent game dynamics are in everyday life. I have spent the last several months contemplating various assessment schemes to try to take the emphasis off of memorizing and regurgitating, and focus on the more natural learning processes of curiosity and struggle with subject matter. When we learn a new video game, or software package, it is almost impossible to memorize this info, but through our struggles with the material, we become proficient. As such, in this class, you will be receiving points for many different activities that are all focused on you learning this information rather than memorizing it to later regurgitate to me.

Levels: You will achieve levels based on the points you accrue as a result of various activities. Just as in various games you play, the more proficient you get with the material, the higher your level. Also, you don't face the risk of extending yourself intellectually, because this schedule is designed so that you don't lose the levels you've achieved. However, keep in mind that the expectations are high, and achievement at the highest levels is difficult. Your level will be updated once per week. The level structure is tied to your final grade as follows:

**Leveling System for Grade Determination:**

**0- < 275 F**

**1- 275 D-**

**2- 285 D**

**3- 310 D+**

**4- 320 C-**

**5- 333 C**

**6- 345 C+**

**7- 367 B-**

**8- 380 B**

**9- 400 B+**

**10- 420 A-**

**11- 435+ A**

**Assessments:**

Grades will be calculated from the following:

Class Quizzes (4 x 50 pts) 200 pts

In-class assignments (7 x 25 pts) 175 pts

Final Reflection Paper 100 pts

**Total Points Possible 475 pts**

The quizzes are designed to ensure you are keeping up with class and reading material. The instructor reserves the right to award extra credit beyond that listed for pop-quizzes (attendance), special projects, etc.

**Classroom Policies:**

Quizzes/Exams: Handouts and other instructional materials will be posted to Canvas as needed during the course of the semester. There is not a text for this course, so any and all materials presented that you come into contact with in and out of class (i.e. quizzes, handouts, reading material) will be fair game on quizzes.

Missed quizzes/exams: **There will not be a make-up quiz scheduled without verifiable documentation of an extreme circumstance (e.g. death in family). In the event of a COVID-19 related issue, see above about flexibility.**

Class participation: Participation in class is encouraged, and will make for more meaningful discussions. Respect of fellow classmates ideas and statements will be expected, lack of respect will not be tolerated.

Academic honesty required: At no time will cheating on quizzes/ exams be tolerated. Depending on the situation, the quiz/exam may receive zero points, the student may be asked to leave the class, or the student may be subjected to further disciplinary action at the university level (e.g., hearing with possible dismissal from the university). Plagiarism can be committed unintentionally by quoting or copying others' works without providing the proper credit (literature citations). Ask for help if you are unsure about plagiarism. Refer to University websites

(<http://www.lib.utk.edu/instruction/plagiarism/>) on plagiarism, and academic dishonesty (<http://judicialaffairs.utk.edu/students/academic.php>) for more information.

## **Class Schedule\***

### **CRN 33782--Section 002**

<b>Week</b>	<b>Class</b>	<b>Topics</b>
<b>1</b>	<b>W 1/20 M 1/25</b>	<b>Intro, Bullshit, Data Types BS Inventory Assignment</b>
<b>2</b>	<b>W 1/27 M 2/1</b>	<b>Quiz 1, Bias, Randomness, Repeatability Can you spot BS? Assignment</b>
<b>3</b>	<b>W 2/3 M 2/8</b>	<b>Dr. Paul Giordano- "The Rest of the Story" BS in Agriculture</b>
<b>4</b>	<b>W 2/10 M 2/15</b>	<b>Quiz 2, Using Stats to cover up BS, Central Tendency/Variation, etc. Curating some Stats BS in Agriculture</b>
<b>5</b>	<b>W 2/17 M 2/22</b>	<b>Quiz 3, Visualization BS, Deliberate Misrepresentation When Marketing gets their hands on data</b>
<b>6</b>	<b>W 2/25 M 3/1</b>	<b>Quiz 4, Causality, Correlation/Regression, Repeatability/False Results BS Correlations in Ag- A special kind of BS!</b>
<b>7</b>	<b>W 3/3 M 3/8</b>	<b>Reflection on BS Detection No Class</b>

**Assignments are always due by 11:59 PM the Tuesday before the next class period.**

### **CRN 24835--Section 301 (No class W 1/20)**

<b>Week</b>	<b>Class</b>	<b>Topics</b>
<b>1</b>	<b>M 1/25 W 1/27</b>	<b>Intro, Bullshit, Data Types BS Inventory</b>
<b>2</b>	<b>M 2/1 W 2/3</b>	<b>Quiz 1, Bias, Randomness, Repeatability Can you spot BS? Assignment</b>
<b>3</b>	<b>M 2/8</b>	<b>Dr. Paul Giordano- "The Rest of the Story"</b>

	W 2/10	BS in Agriculture
4	M 2/15 W 2/17	Quiz 2, Using Stats to cover up BS, Central Tendency/Variation, etc. Curating some Stats BS in Agriculture
5	M 2/22 W 2/24	Quiz 3, Visualization BS, Deliberate Misrepresentation When Marketing gets their hands on data
6	M 3/1 W 3/3	Quiz 4, Causality, Correlation/Regression, Repeatability/False Results BS Correlations in Ag- A special kind of BS!
7	M 3/8	Reflection on BS Detection

**Assignments are always due by 11:59 PM the Sunday before the next class period.**

**\*Please note that this schedule is a proposed schedule. Changes may be made to the above schedule as the semester progresses.**