

**AEC 6932 Statistical Thinking in Behavioral Sciences  
Fall 2022 (August 24 – December 7); 3 Credits; Online**

**Instructor:**

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-Office hours: By appointment

**Course Delivery:**

This course is offered online, and it is housed in Canvas, the University of Florida's e-learning platform. You can access this e-learning platform by directing your browser to [elearning.ufl.edu](http://elearning.ufl.edu) and clicking on "Log in to e-Learning". When prompted, enter your Gatorlink ID and password to log in the system. You can learn more about using Canvas here: <https://elearning.ufl.edu/keep-learning/>.

**Course Organization:**

Within Canvas, the course is organized by weekly modules. Each module will officially begin on the Monday of each week, unless different instructions are provided, students may complete the coursework at their own pace within this weekly timeframe. The course homepage can be accessed 24 hours a day and contains everything you will need to complete this course, including: the syllabus, details for completion of every assignment, course information, tools for communicating with the instructor and other students, etc. A weekly learning module typically contains: 1) the topic and learning objectives for the week; 2) a list of assigned readings from your required textbook and/or additional sources; 3) recorded lectures and handouts; and, 4) information about assignments and/or discussion questions that are due that week (see: "[A note about on-line participation](#)").

**Course Description:**

This is an introductory course designed to present basic fundamentals and statistical procedures to agriscience teachers, extensionists, and other educators or practitioners within agriculture and natural resources. It is designed to assist students in becoming better consumers of research. Statistical topics and techniques covered during this semester include descriptive statistics, measures of central tendency and variability, probability, statistical inference and hypothesis testing, parametric and nonparametric testing, and multivariate techniques (partial correlation and multiple regression).

**Objectives:**

Upon successful completion of the course requirements, students will...

- become familiar with the basic concepts, methods, and procedures of statistical analysis in the social sciences, as well as the logic underlying those procedures;
- acquire statistical literacy (to be able to explain the differences among various statistical techniques and identify an appropriate technique for a given set of variables and research questions); and,
- learn how to apply their knowledge of statistics in thinking critically about scholarly research and popular press reports of data and research.

Students interested in developing additional skills related to the statistical analysis of quantitative data, can obtain relevant hands-on experience by utilizing the datasets, examples, and detailed descriptions that are included in the required textbook for the course. The book provides step-by-step instructions for conducting statistical analyses with both Microsoft Excel and the Statistical Package for the Social Sciences (SPSS); these two applications are available to the University of Florida's students through: <https://apps.ufl.edu/vpn/index.html>.

### **Required Textbook and Readings:**

Students are expected to purchase the text (available at the University of Florida Bookstores or at online providers):

- Frankfort-Nachmias, C., Leon-Guerrero, A., and Davis, G. (2020). *Social Statistics for a Diverse Society*. (9<sup>th</sup> Ed). Thousand Oaks, CA: Sage. ISBN: 9781544339733 [paperback or electronic versions are acceptable]  
-- Supplementary readings (i.e., journal articles) will be assigned to demonstrate the application of key concepts covered in the textbook and lecture of the week.

### **Class Dynamics:**

Since the social construction of knowledge is a key component of this course, class participation is a chief expectation from students; this will be achieved through transformative dialogue in the form of online group discussion. All students are expected to actively participate in the discussion board forums. The course instructor will monitor the on-line discussion forums (see: "[A note about on-line participation](#)"). Each week students are expected to complete the assigned reading, review any recorded lectures that might be posted, and submit the required assignment(s).

### **A note about online participation**

The course discussion board provides a venue to increase interaction. Students must post their comments, read the postings of other students (the system does not allow reading other posts before posting your own comments), and respond to other students' comments (you must respond to the comments of, at least, another student). Points for this assignment are awarded based both on the student's participation and the appropriateness/applicability of the contribution to the assigned discussion topic. Failure to be engaged in the sharing of ideas not only limits the value you gain from this course, but also what others may obtain from it.

Just like in any social setting, there are expected norms that should guide the different types of interactions that, as a group, we will have in this course. To ensure that you, and everybody else in this

course, has a satisfactory and productive experience as we interact during the semester, please read and follow the guidelines included in the [Netiquette Guide for Online Courses](#). That same document also contains relevant information related to **privacy and security** practices that you must follow. You can obtain further information and support related to technology requirements and online security and privacy from the [UF Computing Help Desk](#).

### Assignments, Dates, Grades, and Feedback:

Full descriptions of each activity/assignment are posted within the Assignments section of the course site in Canvas. Please see the section on “[A Note About Written Reports](#)” to become familiar with the general instructions for written assignments.

<i>Activity/Assignment</i>	<b>Due Date</b>	<b>Total Point Value</b>
<i>Bio-sketch</i>	08/27/2022	40
<i>Discussion Board Posts (8)</i>	Multiple	160 (20 each)
<i>Key Concepts (4)</i>	1 <sup>st</sup> 09/17/22	100
	2 <sup>nd</sup> 10/08/22	100
	3 <sup>rd</sup> 11/05/22	100
	4 <sup>th</sup> 12/03/22	100
<i>Exams (2)</i>	Midterm 10/15/22	200
	Final 12/10/22	200
<b>Total Points</b>		<b>1000</b>

The instructor will complete the grading process and post grades within 7 business days from the due date specified in the syllabus for each activity/assignment. The points obtained by the student in all the assignments will be added to calculate the final grade, the calculation will be done in alignment with the Course Grading Scale shown below. Grades will be posted on Canvas where students can securely and privately access them. Please carefully read the whole syllabus for information on additional university’s policies and services relevant to grades and grading – contact the instructor if further information is required.

#### Course Grading Scale

<b>A</b>	940-1000	<b>A-</b>	900-939	<b>B+</b>	870-899
<b>B</b>	840-869	<b>B-</b>	800-839	<b>C+</b>	770-799
<b>C</b>	740-769	<b>C-</b>	700-739	<b>D+</b>	670-699
<b>D</b>	640-669	<b>D-</b>	610-639	<b>E</b>	609 or less

When posting grades, the instructor will include clear, concise, and relevant written and/or verbal feedback to further promote students’ learning. If additional clarification is required by the student, the instructor can be contacted via email to schedule an individual phone or Zoom call to discuss the assignment, grade, and feedback provided. Students are strongly encouraged to contact the instructor with any questions they may have related to the course content, activities, and assignments. Email consultations will normally be responded within 24 hours.

## Course Schedule

Date	Week: Topic	Readings*	Due
08/24-08/27	<b>1:</b> Course Introduction.		<i>Bio-sketch</i>
08/29-09/03	<b>2:</b> The What and the Why of Statistics.	<b>SS4aDS:</b> Ch. 1; Additional readings	<i>Discussion 1</i>
09/06-09/10	<b>3:</b> The Organization and Graphic Presentation of Data.	<b>SS4aDS:</b> Ch. 2; Additional readings	<i>Discussion 2</i>
09/12-09/17	<b>4:</b> Measures of Central Tendency.	<b>SS4aDS:</b> Ch. 3; Additional readings	<i>1<sup>st</sup> Key Concepts</i>
09/19-09/24	<b>5:</b> Measures of Variability.	<b>SS4aDS:</b> Ch. 4; Additional readings	<i>Discussion 3</i>
09/26-10/01	<b>6:</b> The Normal Distribution.	<b>SS4aDS:</b> Ch. 5; Additional readings	<i>Discussion 4</i>
10/03-10/08	<b>7:</b> Sampling and Sampling Distributions.	<b>SS4aDS:</b> Ch. 6; Additional readings	<i>2<sup>nd</sup> Key Concepts</i>
10/10-10/15	<b>8:</b>	<b>--- Midterm Exam ---</b>	
10/17-10/22	<b>9:</b> Estimation.	<b>SS4aDS:</b> Ch. 7; Additional readings	<i>Discussion 5</i>
10/24-10/29	<b>10:</b> Testing Hypotheses.	<b>SS4aDS:</b> Ch. 8; Additional readings	<i>Discussion 6</i>
10/31-11/05	<b>11:</b> Bivariate Tables.	<b>SS4aDS:</b> Ch. 9; Additional readings	<i>3<sup>rd</sup> Key Concepts</i>
11/07-11/12	<b>12:</b> The Chi-Square Test and Measures of Association.	<b>SS4aDS:</b> Ch. 10; Additional readings	<i>Discussion 7</i>
11/14-11/19	<b>13:</b> Analysis of Variance.	<b>SS4aDS:</b> Ch. 11; Additional readings	<i>Discussion 8</i>
11/21-11/26	<b>14:</b>	<b>--- No Class --- Happy Thanksgiving (11/24/2022)</b>	
11/28-12/03	<b>15:</b> Regression and Correlation.	<b>SS4aDS:</b> Ch. 12; Additional readings	<i>4<sup>th</sup> Key Concepts</i>
12/05-12/10	<b>16:</b>	<b>--- Final Exam --- (due 12/10/2022)</b>	

\* **SS4aDS** = Social Statistics for a Diverse Society (required textbook).

### A Note About Written Reports:

Cite all references using APA style format. APA (American Psychological Association) has a reference manual available at the University of Florida Library and they have information about writing and references on their website, which is <http://www.apa.org/>. The format to be used for papers is double-spacing; one-inch margins, and typed in 12-point font, unless otherwise noted. A consistent style is used for grading written papers. Primarily, show that you have learned and are able to apply the course material through your writing. In grading, the instructor looks for student's cognitive understanding and application of theories, principles, concepts, ideas, approaches that have been covered in readings and the course.

### **Attendance:**

Given the importance of class discussion and participation, it is not possible for a student to perform satisfactorily in the course without regularly contributing to the planned activities and assignments. Students are **required** to be active in the course throughout the semester. Only documented doctor's excuses or UF-approved activities will be excused.

### **Lateness Policy:**

A *10% per day* deduction will be assessed for assignments turned in late. Work more than a week late will *not* be accepted. This policy will be strictly enforced. All assignment and online discussion deadlines are *critical* for your individual success in this course and the success of the course overall. If you feel that you will be unable to meet these deadlines, you *must* communicate this to the course instructor *at least one day before the assignment or discussion posting is due.*

### **Grades and Grade Points**

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### **Absences and Make-Up Work**

Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

### **Course Evaluation**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

### **Academic Honesty**

"UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

### Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- Health and Wellness
  - **U Matter, We Care:** If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) or 352 392- 1575 so that a team member can reach out to the student.
  - **Counseling and Wellness Center:** <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.
  - **Sexual Assault Recovery Services (SARS)** Student Health Care Center, 392-1161.
  - **University Police Department**, 392-1111 (or 9-1-1 for emergencies).  
<http://www.police.ufl.edu/>.
- Academic Resources
  - **E-learning technical support**, 352-392-4357 (select option 2) or e-mail to [Learningsupport@ufl.edu](mailto:Learningsupport@ufl.edu). <https://lss.at.ufl.edu/help.shtml>.
  - **Career Resource Center**, Reitz Union, 392-1601. Career assistance and counseling.  
<http://www.crc.ufl.edu/>.
  - **Library Support**, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.
  - **Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.  
<http://teachingcenter.ufl.edu/>.
  - **Writing Studio**, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>.

### Services for Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### In-Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal

educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

### **Disclaimer About Syllabus:**

Serious effort and consideration were used in formulating the syllabus presented by the instructor. While viewed as an educational contract between the instructor and student, unforeseen events may cause changes to the scheduling of assignments, readings, etc. The instructor reserves the right to make any changes deemed necessary to best fulfill the course objectives. Students registered for this course will be made aware of any changes in a timely fashion using reasonable means. This disclaimer does not abrogate any student rights as described by University rules and regulations.