

HLP 6515 Evaluation Procedures

Spring semester 2023

Instructor

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Dean of Student:

<https://care.dso.ufl.edu/instructor-notifications/>
352-294-2273.

Office hours

Monday 8:00 – 10:00 pm over zoom <https://ufl.zoom.us/j/95287073932>
Wednesday 9:30-11:00 am in person (190B Florida Gym)

NOTE

In response to COVID-19 outbreak in the U.S., you can attend this class online if you have concerns about your health. No evidence required but notify me through an email to switch on Zoom session (link above). The lectures are not recorded, make sure to attend.

Summary

This course consists of two parts – theoretical and practical. From the theory perspective, this is an introductory course in descriptive and inferential statistics. The course approaches the abstract concepts in a systematic and logical progression, so that they are easily attainable. The topics include levels of measurement, frequency distributions, measures of central tendency and dispersion, probabilities and normal distribution, sampling distribution of the mean, and confidence intervals, among others. Students will learn the logic of hypothesis testing and have a general understanding of how the statistical procedures – t-test, one-way ANOVA, chi-square, correlations and regression – work. They will learn how to select an appropriate statistical test for a given research question.

From the practical angle, the course teaches basic data analysis skills through hands-on lab assignments involving real data, mostly from social sciences, sports, and tourism. The lab part of the course has a steep, but manageable, learning curve when students get to know SPSS software, its interface, and main commands. Throughout the course, students should allocate the appropriate amount of time for SPSS assignments.

Learning objectives

At the end of the course students are expected:

- to acquire basic working knowledge of SPSS and advanced Excel;
- to know how to read SPSS output and interpret test results;
- to be able to select appropriate statistical procedures for answering a particular research questions;
- to know how to apply most common univariate and bivariate statistical tests;
- to be able to organize, present, and interpret data in SPSS and Excel.

The course objectives are reached through lectures, homework and lab assignments, data analysis projects, as well as quizzes and exams.

Reading

1. Ritchey, Ferris J. (2008). *The statistical imagination*, 2nd ed. McGraw-Hill (required). The book is out of print; rent or buy a used book on Amazon: <https://www.amazon.com/Statistical-Imagination-Elementary-Statistics-Sciences/dp/0072943041>
2. Field, A. (2013). *Discovering statistics using SPSS*. Sage publications. (recommended). You can get any other recent introduction to SPSS book.

Software

You will need to use SPSS software for your homework and in-class assignments. One way is to **use the UF computer labs**. Note that the computer labs may be reserved for classes – **plan ahead!** The computer lab locations and schedules are available at <https://labs.at.ufl.edu/computer-labs/>

You may find it more convenient to install SPSS software on your computer. IBM SPSS can be acquired in two alternative ways:

1. Cheap and fast; no Internet needed: You can lease the student's edition from the University of Florida at discounted rate (\$35 per annum): <https://software.ufl.edu/software-listings/spss-licensing-for-students.html>.
2. Free but needs fast Internet connection: You can use the remote access to SPSS through the UF apps: <http://info.apps.ufl.edu/>. You may need to install Citrix Receiver prior to using this service.

Note: The instructor does not solve technical issues related to installation of SPSS software. For issues with technical difficulties, contact the UF Help Desk at <http://helpdesk.ufl.edu>; (352) 392-HELP (4357); Walk-in: HUB 132.

Since the software is available at the UF computer labs, requests for make-ups due to technical issues will not be granted.

Course organization

Course material is divided into multiple topics, with one week typically allocated for each topic. Course activities include lectures, SPSS lab instructions, quizzes, homework problems from the textbook, and SPSS assignments. Quizzes and assignments provide valuable practice and serve as previews of what is expected for exams. They also help students keep up with the course material.

Assignments and evaluation

The emphasis is on development practical skills in basic data analysis, not on theoretical framework, hence the class has many assignments; allocate the appropriate amount of time to this course. You may find it beneficial to study material with a fellow student to get a better grasp of concepts. However, **the final version of the assignment that you submit should be your own work**. Do not directly copy the work of another student! Homework is preparation for quizzes and exams; therefore, it is counterproductive to let someone else do your thinking.

The final grade will be based upon your scores in quizzes, homework problems from the textbook, and SPSS assignments, and two exams for this class. The total grade G (0-100%) will be a combination of the grades in the following categories:

1. Homework problems from the textbook (20%)
2. SPSS assignments (20%)
3. Quizzes (20%)
4. Exam 1 (20%)
5. Exam 2 (20%)

To compensate students for possible grading mistakes, each student will be given an additional 0.5% to their grade. Additionally, **ONE** lowest score in **ONE** category, except for exams, is dropped. Hence, there will be no grade rounding or assignments for additional credits. The final percentage points are translated into the letter grades using the following scheme:

| <i>Percentage</i> | <i>Letter Grade</i> | <i>Percentage</i> | <i>Letter Grade</i> |
|-------------------|---------------------|-------------------|---------------------|
| 90 – 100 | A | 70 – 76.99 | C |
| 87 – 89.99 | B+ | 67 – 69.99 | D+ |
| 80 – 86.99 | B | 60 – 66.99 | D |
| 77 – 79.99 | C+ | Below 60 | E |

If you noticed a scoring error, please notify the instructor within one week that a scoring error is made. No issues regarding scoring will be reviewed beyond this one-week period or after midnight of the last day of the Examination week, whichever comes first.

Quizzes and Exams

A short quiz will usually cover the material from the previous theme, but expect occasional questions related to the earlier topics. The quizzes will be closed book. **No quizzes or exams should be taken outside the classroom unless permitted by the instructor.** The exams will have the same format (with few more problems to solve), and may cover any topic in the course.

There will be two exams – a midterm and a final. **DO NOT MISS AN EXAM!** Make-up exams will be given only under the most serious circumstances (e.g., illness, accident, or emergency). **Your circumstances should be confirmed by the Dean of Students:** <https://care.dso.ufl.edu/instructor-notifications/>; 352-294-2273.

There may be quantitative questions, please bring the calculators. **For full credit make sure the instructor is able to read through your handwriting.** There will be no points awarded for effort alone: 100% grade will require full answer to all questions, a returned blank paper will be evaluated 0%, and a reasonable progress towards answering the questions will be evaluated somewhere in between.

Group work and academic honesty

The plagiarism and other violations of the academic honesty will be punished with 0% grade for the assignment; additionally, after the second incident the offender will be reported to the head of department and/or graduate school for possible actions. The UF defines plagiarism in the following way (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>):

“(a) Plagiarism. A student shall not represent as the student's own work all or any portion of the work of another. Plagiarism includes but is not limited to:

- 1. Quoting oral or written materials including but not limited to those found on the internet, whether published or unpublished, without proper attribution.*
- 2. Submitting a document or assignment which in whole or in part is identical or substantially identical to a document or assignment not authored by the student.”*

Further, each student is expected to abide by the Honor Code: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity” (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>). Please refer to the abovementioned Honor Code for a complete explanation of the University of Florida Academic Honesty Policy.

Class policies

If you are not able to make it to the class

Always contact me and cc: your grader if are going to miss a class or unable to return an assignment in time.

Late assignment submission, skipping a quiz or an exam

Closely follow the course logistics with respect to submission of your work. All assignments (quizzes, problems from the textbook, and SPSS labs) are due prior to the beginning of the next class. **No late submissions, please. The lowest score is dropped,** therefore, your overall grade will not be affected by missing one deadline for one assignment. Save this “allowance” for a real emergency! No make-up assignments or quizzes will be allowed; in exceptional circumstances (e.g., student athlete’s game travel on a quiz day) a required assignment or quiz will be dropped with no penalty. It is up to the course instructor to decide whether the student should be given this opportunity. A minor sickness or a short travel will not be considered an excuse for not returning the homework. The reason for point deduction is that you always will be given enough time to complete and return an assignment few days *before* the due date; **please plan ahead for emergency situations.**

Food

Water in bottles and spill-proof cups is allowed by the class policies, but may be prohibited in a specific room; **food is not allowed.**

Special accommodations

Students requesting special classroom accommodations must first register with the Dean of Students Office. Also, please let the instructor know your needs ASAP.

Miscellanea

1. Please switch off the sound on your phones and refrain from using the Internet, playing games, reading the books and other activity unless it is directly related to the course.
2. Unless an urgent business requires my attention, I will be available for questions after the lecture hours. For more complex questions that require substantial time please secure an appointment by sending in an email.

Course calendar

Please refer to the attached table for **tentative** course calendar.

FINE PRINT

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honor-code/). Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. Please refer to the abovementioned Honor Code for a complete explanation of the University of Florida Academic Honesty Policy.

CAMPUS RESOURCES

Health and Wellness

U Matter, We Care: If you or a friend is in distress, please contact 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.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

Sexual Assault Recovery Services (SARS): Student Health Care Center, 392-1161.

Disability resource center: <https://drc.dso.ufl.edu>, 392-8565, accessUF@ufsa.ufl.edu.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@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/>

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf; On-Line Students Complaints:

<http://www.distance.ufl.edu/student-complaint-process>

Student Complaints

Campus students: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf;

On-Line students: <http://www.distance.ufl.edu/student-complaint-process>

Covid-19 and monkey pox (from <https://coronavirus.ufl.edu>)

Although transmission rates are declining nationally, community transmission in Alachua County continues to be high. With that in mind, we recommend all members of the campus community wear well-fitting masks such as an N95, KN95 or a surgical mask in public spaces; stay current with their vaccinations and boosters; get tested if they exhibit symptoms or have been exposed; and isolate appropriately in the event they contract the virus. As a reminder, individuals with COVID should isolate for a minimum of five days and wear a well-fitting mask for an additional five days in public spaces to minimize the risk of infecting others.

Those who are immunocompromised or have other risk factors are encouraged to consult with their physicians about medicines that can help protect against COVID before exposure as well as reduce the severity of the illness once a person tests positive. Further information on vaccinations and testing is available at coronavirus.UFHealth.org.

Because of at-home testing and the discontinuation of UF's Screen, Test & Protect program, instructors will not receive notice of student absences but are still encouraged to be flexible in the event a student needs to isolate. Additionally, KN95 masks are available through colleges and departments for faculty and staff.

Course schedule (subject to change)

| Week | Lecture | Objectives | Lab | Reading |
|------|--|--|-------|---------------|
| 1 | 1. Intro to statistics. Data: levels of measurement | INTRODUCTION, COURSE OUTLINE Research process & data analysis Review: Fractions, proportions, percentages, and rates Lab: working with SPSS | Lab 1 | Chapter 1 |
| 2 | 2. Descriptive statistics; frequency distribution. Data visualization. | Sources of statistical error Levels of measurement Frequency distributions Charts and Graphs | Lab 2 | Chapter 2, 3 |
| 3 | 3. Measuring data central tendency and spread | Mean, median, and mode Frequency distribution curves for interval/ratio variables The range and the standard deviation Z-scores, normal curve | Lab 3 | Chapter 4, 5 |
| 4 | 4. Probability Math. Normal distribution. | Normal distribution Normal curve table and computing areas under the normal curve Computing percentile score using the normal curve | Lab 4 | Chapter 6 |
| 5 | 5. Sampling distributions. Central limit theorem. | Point estimates Sampling distributions and standard errors Law of large numbers Central Limit Theorem | Lab 5 | Chapter 7 |
| 6 | 6. Computing confidence intervals | Computing a confidence interval of a population mean Computing a confidence interval of a population proportion Choosing a sample size | Lab 6 | Chapter 8 |
| 7 | Exam 1 | | | |
| 8 | 7. Hypothesis testing | Hypothesis testing and the six steps of statistical inference The large single-sample means test Understanding p-values and their relationship to the level of significance The small single-sample means test The "Students' t" sampling distribution | Lab 7 | Chapter 9, 10 |

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|----|--|--|--------|---|
| 9 | 8. t-test | Bivariate analysis: three approaches to measuring statistical relationships Two-group difference of means test for independent samples (t-test) T-test for large and small samples | Lab 8 | Chapter 11 |
| 10 | 9. ANOVA | The logic of Analysis of Variance (ANOVA) and the general linear model Range tests | Lab 9 | Chapter 12 |
| 11 | 10. Chi-Square | Chi-square test for a relationship between two nominal variables Using Chi-square as a difference of proportions test | Lab 10 | Chapter 13 |
| 12 | 11. Correlation and regression 1 | Basic ideas behind bivariate correlation and regression techniques Observing scatterplots for linear relationships Calculating bivariate correlation and regression statistics | Lab 11 | Chapter 14, 15 |
| 13 | 12. Review | Review of the topics for the final exam. Preparation for the exam. Data analysis on your own. | Lab 12 | |
| 14 | 13. Additional topic: Multiple linear regression | Multiple linear regression | Lab 13 | Andy Fiend. Discovering statistics through SPSS. Chapter 7. |
| 15 | Exam 2 | | | |