FCS 3210-90 (FCS Statistics), Fall 2017

*** Please read the syllabus carefully. It is a contract of sorts,

*** outlining your rights and responsibilities as a student in this

*** course.

Official U of U description: How to present and analyze data relevant to Family and Consumer Studies. Topics include means, standard deviations, T-tests, chi-square, ANOVA, regression analysis, correlations, and computer assignments.

Overview: The goal of this class is to teach you some of the statistical techniques often used by professional researchers. You learn to employ basic statistical techniques in support of a substantive argument; you will also have a better understanding of published quantitative research. This course should be viewed as a learner's permit to practice statistics, not an inoculation against future exposure to statistics.

What you'll learn: an introduction to quantitative data analysis.

What you'll get: four credits and fulfillment of a Department of Family and Consumer Studies requirement; the groundwork for a graduate-level introductory class in social statistics (e.g., FCS 5110/6110).

What's expected of you: scalar algebra (i.e., the kind you learned in high school) & reasonable familiarity with computers.

Instructor: Professor Nicholas H. Wolfinger (Nick to you)

Class times & location: ONLINE CLASS

Office hours: Tuesday 6:35-7:35, Thursday, 3:30-4:35, and by appointment

Office: 256 Alfred Emery Building

E-mail: Nick.Wolfinger@fcs.utah.edu; I check constantly. Please email me here, not on Canvas.

Phone: (801) 581-7491 (office). I will only be in my office during office hours, so email is better. If you phone my office and I'm not there, I'll receive an email notification. Accordingly, please speak slowly and clearly.

Mailbox: 228 Alfred Emery Building, the Department of Family and Consumer Studies office. If turning in an assignment make sure to sign the receipt verification log (ask at office).

Internet: Canvas, formerly Blackboard Vista, formerly WebCT. I will be posting homework and handouts here. Do not attempt to contact me here--please use my email instead (Nick.Wolfinger@fcs.utah.edu).

Things to get:

- 1) Please buy a dumb calculator for the exams. A dumb calculator adds, subtracts, multiplies, divides, takes square roots, but does nothing else. They can be purchased at the dollar store.
- 2) OPTIONAL: a flash drive (small is fine) will make some of the computer work easier.

Books, & reading for this course:

A book isn't required for this course, but it's helpful to have one or more introductory statistics texts on hand as a reference.

There is a high quality statistical textbook available as a free download. You should all do so: https://openstaxcollege.org/textbooks/introductory-statistics.

Another stats book I like is *Elementary Statistics in Social Research*, 12th edition. Jack Levin, James Alan Fox, and David R. Forde (Pearson Education Inc., 2013). ISBN-10: 0-205-84548-7. Older editions are just fine, by the way. If you do buy this book, I encourage you to buy it used on http://www.half.ebay.com/. If you want to obtain it locally, try KSL, http://www.half.ebay.com/.

Here are some other stats books that I think well of. Any edition is fine, although other things being equal newer is generally better:

Applied Statistics for the Social and Health Sciences, by Rachel A. Gordon (ISBN-10: 0415875366)

Introduction to the Practice of Statistics, by David S. Moore and George McCabe (ISBN-10: 1464158932)

Introductory Statistics, by Thomas H. Wonnacott and Ronald J. Wonnacott (ISBN-10: 0471615188; older, but still good)

There is something to be said for having more than one stats book. Maybe one will offer just the right book at just the right time.

If you need more information about anything, there are many good resources on the Internet. Wikipedia has good entries on all statistical concepts. Stata commands can be investigated by googling "COMMAND NAME Stata."

I encourage you to read the first two chapters of the free download text. It will provide useful background. Thereafter, consult a text to firm up your understanding of difficult concepts.

Grades: Homework (50%), midterm (20%), presentation (5%), final (25%)

Grades will be curved—but only to your benefit—and based on the following scale:

Α	93%+	A-	90%-92%	B+	86%-89%
В	83%-86%	B-	80%-82%	C+	77%-79%
С	73%-76%	C-	70%-72%	D+	67%-69%
D	63%-66%	D-	60%-62%	Ε	<60%

What are these things I have to do?

Homework: Most weeks you will receive a homework assignment via Canvas. Please check Canvas after every class to see if a new assignment has been added. Your lowest homework grade will be discarded at the end of the semester (in other words, there is one assignment you need not complete). Some homework will require use of statistical software called STATA.

Presentation: The presentations will begin on Thursday, October 5, and run for the rest of the semester. Sign up on Doodle

(https://doodle.com/poll/8tksdkgkexfvdgib) for your four to five minute presentation. For your security, I encourage you to sign up for a Doodle account (it's free). After you schedule a date, please submit your presentation up to one week before the scheduled date—and no later than the end of the scheduled date—by uploading to YouTube, then submitting the link on Canvas. Make sure you change the privacy settings. I encourage you to set it to "unlisted." This way people will only be able to see the video if you provide its URL.

You will be required to present the quantitative findings from an article in a newspaper or magazine, website, scholarly journal, or book. Tell the class what the article or book is about, present data, and offer your opinion as to whether you're convinced. Presentations are graded on a pass/fail basis; in other words, you need only do one to get all points.

Tests: Both exams (midterm and final) will be arranged through UOnline. Please register at https://uonline.utah.edu/ as soon as possible so you can have your choice of time and location. If you are out-of-area student, please contact UOnline **immediately** to arrange proctoring for your exams. Contact me immediately if you have trouble doing so. I will not be responsive to last-minute requests to arrange testing.

You can take one letter-sized page of notes (double-sided, hand-written or typed) with you to the exams. You should also take a dumb calculator with you. A dumb calculator

is one that is limited to addition, subtraction, multiplication, division, and square roots. You may not use your phone as a calculator. Each exam will be on Canvas and password-protected. Please present your U student ID when checking in at the UOnline testing site you have chosen at registration. You will have 120 minutes to finish each exam.

You must speak with me <u>before</u> the scheduled date if you anticipate missing an exam. Retroactive (i.e., after the exam) notification is acceptable only if you or an immediate family member is in the hospital or in jail. Should either be the case please provide written documentation.

COURSE SCHEDULE

Week 1	Introduction, central tendency		
Week 2	Visualizing data		

Week 3 More visualizing data, lowess

Weeks 4-5 Populations, samples, & the standard error

Weeks 6-7 t-tests

Weeks 8-9 Cross tabulation and chi-square tests

Week 10 Correlation

Weeks 11-14 Regression and extensions

Week 15 Test selection, summary, review

Software

Many assignments will require the use of statistical software. The software of choice is STATA (www.stata.com). It is available in CSBS lab computers. I encourage you to use it there, as it's less complicated. You may also access it remotely, at https://apps.csbs.utah.edu/Citrix/XenApp/auth/login.aspx. Log in using your University of Utah ID and password. You will be required to download and install the Citrix app. Remote access requires some understanding of computers, so it will not be supported in class (in other words, you're on your own). Instead, contact CSBS Computing (https://support.csbs.utah.edu/tiki-index.php) for access questions; save the STATA questions for me. STATA will be easier to use if you save data files on your own flash drive. Finally, you are free to buy a copy of STATA. If you do so, don't get Small STATA. You are free to use any other statistical software, but it also will not be supported.

IMPORTANT NOTICES

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

In accordance with the University accommodations policy no accommodations for content will be given.

THE RIOT ACT

Academic honesty: All honesty and plagiarism policies established by the University of Utah will be upheld in this class. Academic misconduct includes, but is not limited to, representing another's work as your own, collaborating on individual assignments, and submitting the same work for more than one course without the permission of both instructors. None of these actions will be tolerated.

If it is discovered that you have engaged in academic misconduct of any type in this course, the Family & Consumer Studies departmental policy states that you must be given a failing grade in the course and be reported to the Dean and the VP for Academic Affairs, who will keep your name on record. Should you be reported more than once, you may face expulsion from the University.

For further information about the University of Utah's policies regarding academic misconduct, please refer to the Student Handbook.

Scheduling accommodations: You should register only for those courses for which you have no scheduling conflicts that will interfere with your ability to complete course requirements. If you must be absent from a specific class to participate in officially sanctioned University activities (e.g. band, student government, intercollegiate athletics), religious holidays, or other obligations meeting with the instructor's approval, you will be permitted to make up or otherwise receive credit for missed assignments or exams.

Grade challenges: If you disagree with the way any test or assignment has been graded, you can make a challenge in writing. Challenges must be typed and submitted to the instructor no later than one week after exam/homework has been returned. Your challenge should explain why you disagree with the way the question was graded, and must include page numbers and/or specific references to lecture or text(s) justifying your disagreement.

<u>General</u>

- 1) Unless otherwise notified there are no extra credit assignments. Please don't ask.
- 2) The schedule of readings, assignments, tests, and topics may change. I will announce any changes in class and via Canvas. You are responsible for being aware of them.
- 3) Unclaimed assignments and tests will be thrown away on December 31, 2017.
- 4) I reserve the right to give pop quizzes at any time.
- 5) Assignments arriving at any time between the due date and the end of the universe are subject to arbitrary and severe penalties.

STUFF THE UNIVERSITY SAYS TO INCLUDE

Statement about the awesomeness of the U

As the only institution in the state classified in the highest research category (R1), at the University of Utah you will have access to state-of-the-art research facilities and be able to be part of the knowledge creation process. You will have the opportunity to do research of your own with faculty who are leading experts in their field, engaging in <u>programs</u> that match your research interests. Further, you will interact with and often take classes with graduate students that provide an advanced understanding of the knowledge in your field.