

SYLLABUS FOR 153	
Fall 2020	California State University, Fresno
ERE 153	Christian Wandeler, Ph.D.
3 Units	Office Number ED 439
Online, Dr Wandeler's Personal Meeting Room: https://fresnostate.zoom.us/j/5592873079	Contact info: cwandler@mail.fresnostate.edu Office phone: 559-278-0355 Cell Telephone: 559-287 -3079 (emergency)
Office Hours: Online by appointment	

Introduction and Course Description

The purpose of this course is to familiarize students with the descriptive and inferential statistical procedures commonly reported in educational and psychological literature. Students will gain an intuitive and computational understanding of frequency distributions and graphs, measures of central tendency and variation, the normal distribution, correlation, regression, t-tests, analysis of variance, and chi-square tests. Emphasis will also be placed on generating and interpreting the results of computer output.

Prerequisites

Prerequisites are basic Mathematics. We will start at the very beginning.

Required Textbooks and Materials

Textbook (e-textbook is free and a print version is available at very low cost. You do not need the calculator mentioned in the book):

Illowsky, B., & Dean, S. (2013). *Introductory statistics*. OpenStax College, Rice University.

We will focus on Chapters 1,2 and 6-13.

The book is available in a wide variety of free online formats via the website listed below. You can use the book in whichever format(s) you want; I recommend that you download the entire .pdf so that you always have access to your book.

<https://openstaxcollege.org/textbooks/introductory-statistics>

Printed copies at a significantly reduced textbook rate are also for sale via the bookstore or www.openstaxcollege.org, or amazon.com

Voluntary book about SPSS:

Yockey, R. (2007). *SPSS Demystified: A Step-by-Step Guide to Successful Data Analysis* (1st Ed.). Harlow: Prentice Hall. (There are newer editions but this one is \$4 on amazon.)

Handouts: Slides on Blackboard

Software: Email, Internet , Blackboard, SPSS (Statistical Software) access on campus

Course Goals and Primary Learning Outcomes

Course Goals: *Get introduced to statistics, understand the potential benefits of it and be able to use basic statistics.*

Primary Learning Outcomes:

Students will be able to:

1. Understand the purposes, uses, and applications of descriptive statistics, inferential statistics, and prediction.
2. Understand the concept of variables and scales of measurement.
3. Construct and interpret various types of graphs.
4. Understand and apply the concept of measures of central tendency and variation.
5. Understand the concept of the normal distribution, the role of the central limit theorem in inferential statistics, classical hypothesis testing, and the types of errors in hypothesis testing.
6. Conceptually understand, calculate, apply in practical educational situations, and interpret computer output for the techniques of correlation, regression, t-tests, one- and two-factor analyses of variance, and chi-square tests.

Assignment and Examination Schedule

Late assignments will NOT be accepted unless you have a good reason. Assignments are due at 11:59pm on the date indicated on blackboard.

Exam 1	100 points
Exam 2	100 points
Capstone	20 points
Modules 1-12 (Worksheet, Quizzes, Assignments, Participation, Group work...)	330 points
TOTAL	550 points

A = 100-90% (495+)

B = 89.99-80% (440-494.9)

C = 79.99-70% (385-439.9)

D = 69.99-60% (330-384.9)

F = <60% (<330)

If you have special needs as addressed by the Americans with Disabilities Act (ADA) and need course materials in alternative formats, notify your course instructor immediately. Reasonable efforts will be made to accommodate your special needs.

Subject to Change Statement

This syllabus and schedule are subject to change in the event of extenuating circumstances. If you are absent from class, it is your responsibility to check on announcements made while you were absent.

Course Policies & Safety Issues

Please refer to the University policies regarding conduct of courses, including cheating and plagiarism, located in the [Catalog](#) and [Schedule of Courses](#).

Participation

Students are expected to regularly participate and should contact the instructor regarding any potential problems due to illness, death in the immediate family, or other situations that may result in missed course requirements. In an emergency, students may contact the Dean of Students. Any missed posts, assignments, and/or exams remain the responsibility of the student (See “Student Affairs” section of the California State University, Fresno General Catalog.)

Cheating and Plagiarism

“Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one’s grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term ‘cheating’ not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one’s own work.” Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university. For more information on the University’s policy regarding cheating and plagiarism, refer to the Schedule of Courses (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

Plagiarism Detection:

The campus subscribes to the SafeAssign.com plagiarism prevention service through Blackboard, and you will need to submit written assignments to SafeAssign.com. Your work will be used by SafeAssign.com for plagiarism detection and for no other purpose. The student may indicate in writing to the instructor that he/she refuses to participate in the SafeAssign.com process, in which case the instructor can use other electronic means to verify the originality of their work. SafeAssign.com Originality Reports **WILL NOT be available for your viewing.**

Computers. At California State University, Fresno, computers and communications links to remote resources are recognized as being integral to the education and research experience. Every student is required to have his/her own computer or have other personal access to a workstation (including a modem and a printer) with all the recommended software. The minimum and recommended standards for the workstations and software, which may vary by academic major, are updated periodically and are available from Information Technology Services (<http://www/csufresno.edu/ITS/>) or the University Bookstore. In the curriculum and class assignments, students are presumed to have 24-hour access to a computer workstation and the necessary communication links to the University's information resources.

Blackboard Access Problems. If you are having problems accessing Blackboard, please contact the Digital Campus (dcfeedback@csufresno.edu) or 559-278-6892.

Make-up Policy

All papers and assignments must be submitted on assigned date. Assignments submitted late **will not be** accepted, with no points awarded. Students are responsible for all material throughout the course. Exceptions to this are possible in the case of extraordinary reasons. Arrangements must be made before any assignment is due at the scheduled time.

University Policies

"For information on the University's policy regarding cheating and plagiarism, refer to the Class Schedule (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations)." See also this link:

(http://www.csufresno.edu/academics/documents/RequiredSyllabusPolicyStatements_001.doc)

Students with Disabilities:

Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the Henry Madden Library, Room 1202 (278-2811).

Honor Code:

"Members of the CSU Fresno academic community adhere to principles of academic integrity and mutual respect while engaged in university work and related activities." You should:

- a) understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism and inappropriate collaboration)
- b) neither give nor receive unauthorized aid on examinations or other course work that is used by the instructor as the basis of grading.
- c) take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate official for action.

Cheating and Plagiarism:

"Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work." Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university. For more information on the University's policy regarding cheating and plagiarism, refer to the Class Schedule (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

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Disruptive Classroom Behavior:

"The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of academic freedom are maintained. ... Differences of viewpoint or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop and understanding of the community in which they live . . . Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class."

Copyright Policy:

Copyright laws and fair use policies protect the rights of those who have produced the material. The copy in this course has been provided for private study, scholarship, or research. Other uses may require permission from the copyright holder. The user of this work is responsible for adhering to copyright law of the U.S. (Title 17, U.S. Code). To help you familiarize yourself with copyright and fair use policies, the University encourages you to visit its [Copyright Web Page](http://libguides.csufresno.edu/copyright) (<http://libguides.csufresno.edu/copyright>).

Technology Innovations for Learning & Teaching (TILT) course web sites contain material protected by copyrights held by the instructor, other individuals or institutions. Such material is used for educational purposes in accord with copyright law and/or with permission given by the owners of the original material. You may download one copy of the materials on any single computer for non-commercial, personal, or educational purposes only, provided that you (1) do not modify it, (2) use it only for the duration of this course, and (3) include both this notice and any copyright notice originally included with the material. Beyond this use, no material from the course web site may be copied, reproduced, re-published, uploaded, posted, transmitted, or distributed in any way without the permission of the original copyright holder. The instructor assumes no responsibility for individuals who improperly use copyrighted material placed on the web site.

Tentative Course Schedule

“The schedule and procedures for this course are subject to change”

DUE Date 11:59pm	Topics	Online meeting (tentative depending on students needs) 12pm	Assignments		
			Quiz	Work- sheet /Task	Other tasks
Module 1 8-24	Introduction, Overview Educational Research, Meaning and role of statistics, scales of measurement, statistical notation, frequency distributions		10	Same as quiz	20
Module 2 8-31	Descriptive statistics, Graphs, percentiles, Measures of central tendency, measures of variability		10	15	5
Module 3 9-7	Standard scores, the normal distribution		10	20	
Module 4 9-14	Statistical inference, Hypothesis testing about means,		10	20 (upload and quiz)	
Module 5 9-21	t-tests - part 1 Independent t-tests, one-sample t-tests, Paired (Dependent) t-tests		10	10	10
Module 6 9-28	t-tests - part 2 Independent t-tests, one-sample t-tests, Paired (Dependent) t-tests		10	10	10
EXAM 1 10-5	ASSESSMENT 1 (will be open from 9-28 to 10-5) to allow flexibility for you)		100		
Module 7 10-12	One-factor analysis of variance (ANOVA), Multiple comparison procedures		10	10	10
Module 8 10-19	Two-factor analysis of variance		10	10	10

DUE Date 11:59pm	Topics	Online meeting (tentative depending on students needs) 12pm	Assignments		
			Quiz	Work- sheet /Task	Other tasks
EXAM 2 DUE 10-26	Exam 2 (will be open from 10-19 to 10-26) to allow flexibility for you), One-factor analysis of variance (ANOVA), Two-factor analysis of variance (ANOVA)		100		
Module 9 11-02	Chi-square		10	10	10
Module 10 11-09	Correlation		10	10	10
Module 11 11-16	Regression		10	10	10
Module 12 12-07	Capstone module		20		