

COLORADO STATE UNIVERSITY

ESS 129 Information Management

Instructor:

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Graduate Teaching Assistant:

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Times: Fall 2019, Tuesday and Thursday, 3:30-4:45pm; October 01 – November 03, 2019

Prerequisites: none (ESS120 or equivalent)

Office Hours: Fassnacht – Thursday 1-3pm NESB B260; Pfohl – Wednesday 12-2pm CS 374

Location: CSU Clark A102

Textbooks: none *Resources:* articles and other materials will be provided through Canvas

Emphasis and Motivation: Social, Ecological and Physical Sciences all require the analysis of data and the interpretation of the results. A student graduating from a WCNR program needs to have the ability to successfully collate, analyze and interpret information and data. This course provides students with the necessary introduction to these skills.

Course Objectives: A successful student will

- demonstrate ability to access (search), retrieve, store, and manipulate information (including files of various formats and various data types, folders, naming conventions),
- demonstrate basic data manipulation skills (using EXCEL), including metadata, accessing data, and importing (parsing) txt (text) and csv (comma separated value) files,
- demonstrate ability to plot and present data, and
- recognize and describe a variety of different data types that are important to Natural Resources, Ecosystem Science, and Watershed Science and Management

How this course supports the ESS and WR learning objectives:

The ESS and WR majors have learning objectives that require development of quantitative approaches for studying and modeling complex ecosystems in both spatial and temporal contexts. ESS 129 is designed to give all students the basic skills in information management, data manipulation and presentation of data, which will be assumed background in subsequent course work. Prior to accessing information and data, a successful ESS129 student must be able to independently begin to assess and define a problem, and develop a strategy towards a solution to a problem requiring the analysis of data.

Assignments:

1a: Cover Letter and Resume for Research Opportunity/Internship – available F2020

1b: Library Resources, File Management, Folder Structure

2: Journal Article Critique – Figures and Table

3: What Graph to Use – You find the data

4: Data Presentation – Public Domain Datasets

5: Time Series Analysis – Advanced Public Domain Datasets

date	topic	assigned	due	date	Topic	assigned	due
10/01	- introduction to the course - what is an e-portfolio? - what is information? - how do we use information in Ecosystem and Watershed Sciences? - types of data			10/03	- developing your resume/CV <i>Leanna Biddle, Career Education Manager</i> [guest speaker] - library resources <i>Jocelyn Boice, NR Librarian, Morgan Library</i> [guest speaker]	1a/1b	
10/08	- graphing data - information storage - file and data formats - development of an e-portfolio, to include a daily log of reflection		1a/ 1b	10/10	- ASCII data - figure expectations - what is a date? - downloading data [bring your computer]	2	
10/15	- data analysis concepts - statistical analysis - functions in EXCEL		2	10/17	- where do we get data? - time series analysis - <i>in-class assignment</i>	3	reflection
10/22	- the IF statement - pivot tables		3	10/24	- presenting figures and tables	4	
10/29	- spatial data representing the world - social data	5	4	10/31	- online spatial data - compound figures - overview and review		5

Grading (Traditional Letter Grade) based on score out of 200 total points:

0. READ THE INSTRUCTIONS

1. Assignments (due Tuesday in class) 5x25 points – All assignments will be submitted via Canvas. Please put your name, the class, date, semester, and assignment number on each assignment. In 20 to 30 words, describe how the assignment connects with the lecture material (5 points). Be patient with yourself and consider sketching out your approach before embarking on the analysis, i.e., engage with the concepts.

Late assignments will have a maximum credit of 50% for the first week after that submission deadline. Assignments submitted beyond one week of the submission deadline will be given a zero.

2. In-class Exercise 5 points – Will submit a photo of the hardcopy with assignment #3.

3. Assignment Reflection (due 10/17) 5 points – In 20 to 30 words, what did you learn from assignment #2

4. Exam (after the last day of class) 65 points – On-line Canvas quiz, short answer (1 hour)

Computer Resources

There are computer labs open to all NR students on the first and second floor of the MSNR building. Student fees pay for the printing credits on the NR computers, i.e., printing is free for you. There are also computers in the library. All these computers have EXCEL and all other relevant software on them. Each NR student gets free downloads of Microsoft Office at <<https://warnercnr.colostate.edu/it/office-365/>> or <<https://www.acns.colostate.edu/software-downloads/>>.

Canvas

Class information will be posted in Canvas <<http://canvas.colostate.edu>>. All assignments are due in Canvas at 330pm on Tuesday, except the last assignment that is due at 330pm on Thursday.

Library & Research Help

The CSU Libraries Help Desk provides basic research and technical assistance either in person at Morgan Library or by phone at 970-491-1841. The Libraries' Ask Us chat service <<http://lib.colostate.edu/help/ask-us>> offers after-hours help. For in-depth assistance, contact Jocelyn Boice, the librarian supporting the Ecosystem Science & Sustainability Department and this course: <jocelyn.boice@colostate.edu> or 970-491-3882.

Missed Lectures

If you miss class, notes must be obtained from another student rather than from the instructor or teaching assistant.

Referencing

It is crucial to provide all necessary information using outside resources, and it is important to be consistent with formatting of references. Various disciplines use difference styles, such as MLA. Journals in the same discipline use different formatting, and even journals from the same publisher can use different styles. It is recommended that the student go to the “author guide” for a particular journal (from one of the papers they retrieve) and adopt that referencing format for this course.

For example, the following is taken from the *American Geophysical Union* (AGU) (accessed 2017-09-27): < <https://publications.agu.org/brief-guide-agu-style-grammar/#reference>> AGU follows APA reference style as found in the Publication Manual of the APA, Sixth Edition. Please note that all sources cited in text, tables, and figures must appear in the reference list, and all entries in the reference list must be cited in text. Responsibility for the accuracy of bibliographic citations lies entirely with the authors.

Text citations. In-text should be cited using author surname(s) and the date of publication: “in earlier studies (Johnson and Smith, 2009)” or “...as given by Johnson and Smith (2008)” or “In 2012, Johnson and Smith’s study showed that....”

Journal abbreviations source

Journal names should be abbreviated according to the List of Title Word Abbreviations: <http://www.issn.org/2-22661-LTWA-online.php>.

Academic Integrity

This course will adhere to the Academic Integrity Policy of the Colorado State University General Catalog and the Student Conduct Code. For more information, see the TILT website: <<https://tilt.colostate.edu/integrity/>>. Students are expected to review the code at the beginning of the semester.