

Term Information

Effective Term Autumn 2021
Previous Value Summer 2012

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

The change being proposed is to transition COMLDR 3537 (Columbus campus only) to a hybrid course with a distance education component. The proposed change is to move the lecture portion of the course online with weekly asynchronous Carmen modules and recorded lectures. The lab will remain in person.

What is the rationale for the proposed change(s)?

Often students experience time conflicts between the lecture times, lab times, or both. By moving the lecture online, this will alleviate some time conflicts. Additionally, statistics and math can be stressful for some students, moving the course online will allow the students to move at their own pace through the modules each week. This format also provides short recorded lectures which the students can go back to if they need to review content, practice a statistical procedure, or prepare for assessments.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

COMLDR 3537 (Columbus campus) has a lead instructor (Dr. Bowling) and a graduate teaching assistant. In semesters past, the lead instructor taught the in-person lectures and the GTA taught the in-person labs. Due to their course load, the lead instructor did not have ample time to engage in the lab sessions. By moving the lectures online, the lead instructor will have more time to engage in the labs to co-teach, assist the TA, and assist the students.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area	Community Leadership
Fiscal Unit/Academic Org	Agri Comm, Educ & Leadership - D1118
College/Academic Group	Food, Agric & Environ Science
Level/Career	Undergraduate
Course Number/Catalog	3537
Course Title	Data Analysis in the Applied Sciences
Transcript Abbreviation	Data Analysis
Course Description	A general education course focused on developing quantitative literacy and logical reasoning through analysis and interpretation of descriptive and inferential statistics. Students will be able to utilize SPSS to perform statistical data analysis, organize and summarize quantitative data, formulate conclusions, and critically evaluate research reports.
<i>Previous Value</i>	<i>The purpose of this course is to develop an overview and basic understanding of descriptive and inferential statistics.</i>
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week
<i>Previous Value</i>	<i>14 Week, 12 Week, 8 Week, 7 Week, 6 Week</i>
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	Yes

Is any section of the course offered	Greater or equal to 50% at a distance Less than 50% at a distance
<i>Previous Value</i>	<i>No</i>
Grading Basis	Letter Grade
Repeatable	No
Course Components	Laboratory, Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	Yes
Admission Condition	Math
Off Campus	Never
Campus of Offering	Columbus, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites	Prereq: Math 1130 or 1148 .
<i>Previous Value</i>	<i>Prereq: Math 1130 (130) or 1148 (148).</i>
Exclusions	
<i>Previous Value</i>	Not open to students with credit for AEE 387.
Electronically Enforced	No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	01.0801
Subsidy Level	Baccalaureate Course
Intended Rank	Sophomore, Junior, Senior
<i>Previous Value</i>	<i>Junior, Senior</i>

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

General Education course:

Data Analysis

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes	<ul style="list-style-type: none">• Students develop skills in drawing conclusions and critically evaluating results based on data.• Students understand basic concepts of statistics and probability.• Students comprehend methods needed to analyze and critically evaluate statistical arguments.• Students recognize the importance of statistical ideas.
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Previous Value

- *Identify types of data and scales of measurement*
- *Distinguish between descriptive and inferential statistics*
- *Display data effectively in tables and graphs*
- *Understand and use descriptive statistics in the presentation of data*
- *Understand and use inferential statistics in the analysis of data*
- *State hypotheses, select and conduct appropriate statistical analysis, interpret the results, and if required, draw meaningful inferences*
- *Recognize misuse of statistics*

Content Topic List

- Introduction to Course, Statistics, & SPSS
- Sampling, Population, Data, & Variables
- Measures of Central Tendency
- Understanding Variability
- Data Visualization
- Normal Distribution and Z Scores
- Significance
- Correlation
- Simple Regression
- Hypothesis Testing
- One Sample t-test (and Z test)
- Independent Samples t-test
- Dependent Samples t-test

Previous Value

- *Introduction to Variables and Statistics*
- *Describing Data with Tables and Graphs*
- *Describing Data using Measures of Central Tendency*
- *Describing Data using Measures of Variability*
- *The Basics of Normal Distributions and z Scores*
- *Describing Relationships – Correlations*
- *Simple regression*
- *Populations, samples, and probability*
- *Sampling distribution and the mean*
- *Mean estimation - Point estimate*
- *Hypothesis testing*
- *t-test*
- *Analysis of variance (ANOVA)*

Sought Concurrence

No

COURSE CHANGE REQUEST
3537 - Status: PENDING

Last Updated: Osborne, Jeanne Marie
04/26/2021

Attachments

- COMLDR 3537 Data Analysis Assessment Plan.docx: GEC Course Assessment Plan
(GEC Course Assessment Plan. Owner: Niewoehner-Green, Jera Elizondo)
- COMLDR 3537_QM Review.docx: Quality Matters Review
(Other Supporting Documentation. Owner: Niewoehner-Green, Jera Elizondo)
- COMLDR 3537 HYBRID Syllabus--Proposed_FINAL.docx: Final Revised Syllabus
(Syllabus. Owner: Niewoehner-Green, Jera Elizondo)
- COMLDR 3537 In Person Syllabus.docx: In-person Syllabus
(Other Supporting Documentation. Owner: Niewoehner-Green, Jera Elizondo)

Comments

- In-person syllabus has been uploaded per the request made on 04/02/2021. *(by Niewoehner-Green, Jera Elizondo on 04/13/2021 12:31 PM)*
- Please upload in-person syllabus for comparative purposes *(by Vankeerbergen, Bernadette Chantal on 04/02/2021 07:39 AM)*
- Revise as per COAA via email 18 February 2021

Revise as per email 28 Jan 2021 *(by Osborne, Jeanne Marie on 02/18/2021 03:27 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Niewoehner-Green, Jera Elizondo	01/15/2021 04:05 PM	Submitted for Approval
Approved	Buck, Emily Brin	01/27/2021 11:33 AM	Unit Approval
Revision Requested	Osborne, Jeanne Marie	01/28/2021 03:44 PM	College Approval
Submitted	Niewoehner-Green, Jera Elizondo	02/17/2021 09:54 AM	Submitted for Approval
Approved	Buck, Emily Brin	02/17/2021 11:34 AM	Unit Approval
Revision Requested	Osborne, Jeanne Marie	02/18/2021 03:27 PM	College Approval
Submitted	Niewoehner-Green, Jera Elizondo	03/31/2021 11:46 AM	Submitted for Approval
Approved	Buck, Emily Brin	03/31/2021 12:18 PM	Unit Approval
Approved	Osborne, Jeanne Marie	04/02/2021 06:34 AM	College Approval
Revision Requested	Vankeerbergen, Bernadette Chantal	04/02/2021 07:39 AM	ASCCAO Approval
Submitted	Niewoehner-Green, Jera Elizondo	04/13/2021 12:31 PM	Submitted for Approval
Approved	Buck, Emily Brin	04/26/2021 10:16 AM	Unit Approval
Approved	Osborne, Jeanne Marie	04/26/2021 01:38 PM	College Approval
Pending Approval	Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Oldroyd, Shelby Quinn Hilty, Michael Vankeerbergen, Bernadette Chantal	04/26/2021 01:38 PM	ASCCAO Approval



SYLLABUS

COMLDR 3537

Data Analysis in the Applied Sciences

Autumn 2021

COURSE OVERVIEW

Course Time and Location

Lecture: Asynchronous Online Weekly Carmen Modules with Recorded Lessons

Lab: In-person Lab sessions

#1—Wednesday: 10:20 am to 12:25 pm; Ag Admin Bldg 005

#2—Wednesday: 12:40 pm to 2:45 pm; Ag Admin Bldg 005

#3—Thursday: 12:40 pm to 2:45 pm; Ag Admin Bldg 005

Course Format

Hybrid Delivery

- COMLDR 3537 has a distance component, as well as an in-person component
- Lectures will be delivered through weekly modules in Carmen
- Labs will be in person

Instructor

Instructor: Dr. Amanda Bowling

Email address: bowling.175@osu.edu (preferred method of contact)

Department: Agricultural Communication, Education, and Leadership

Phone number: 614-688-1121

Office location: 200F Ag Admin Bldg.

Virtual Office hours: Monday 1:00 pm to 2:00 pm or by appointment; Zoom: [\[Link\]](#)

Teaching Assistant

TA: [Name]
Email address: [Email]
Office location: [Office]
Office hours: by appointment

Course Description

A general education course focused on developing quantitative literacy and logical reasoning through analysis and interpretation of descriptive and inferential statistics. Students will be able to utilize SPSS to perform statistical data analysis, organize and summarize quantitative data, formulate conclusions, and critically evaluate research reports.

Credit Hours

3 Hours

Pace of online activities: The online lessons are divided into **weekly modules** that are released each Monday one week ahead of their scheduled time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a **3-credit-hour course**. According to [Ohio State policy](#), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Prerequisites

Math 1130 or 1148

General Education Data Analysis Course Goals

Students develop skills in drawing conclusions and critically evaluating results based on data.

General Education Data Analysis Expected Learning Outcomes (OC)

- OC1 – Students understand basic concepts of statistics and probability. (3000-4000)

- OC1a – Identify basic statistical concepts. (1000-2000)
- OC1b – Describe probability and the role probability plays in statistics. (2000-3000)
- OC1c – Apply basic statistical concepts and probability to analyze and interpret data. (3000-4000)
- OC2 – Students comprehend methods needed to analyze and critically evaluate statistical arguments. (2000-3000)
 - OC2a – Summarize data using descriptive statistics. (2000-3000)
 - OC2b – Infer from a sample to a population using inferential statistics. (2000-3000)
 - OC2c – Given a research problem and data set, select the appropriate statistical methods to analyze and interpret data. (2000-3000)
- OC3 – Students recognize the importance of statistical ideas. (1000-2000)

Course Experiences to Fulfill Learning Outcomes

Core requirements:

- Notions of probability. The axioms of probability, and basic probability calculations. Random variables, and probability calculations using random variables. Expected values.
- Basics of statistical inference. Moving from a sample to a population. Bias and variance. Understanding the margin of error and confidence. The logic of statistical testing. The misuse of statistics.

Additional requirements:

- Summarizing data graphically and numerically. Discriminating between good and bad summaries. Understanding the advantages and disadvantages of a given summary.
- Methods of statistical inference. Statistical testing. Constructing confidence intervals. Making quantitative statistical arguments using data. Understanding and verifying assumptions underlying a given inference.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

REQUIRED

- Salkind, N. J. (2020). *Statistics for people who (think they) hate statistics, 7th Edition*. Sage Publications.

Other requirements

- **Calculator:** A “basic” or scientific calculator which can perform the following functions: add, subtract, multiply, divide, and square root. *Graphing or programmable* calculators and cell phones are not approved for COMLDR 3537 and will not be allowed during exams.

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact OSU IT Service Desk. Standard support hours are available at <http://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat Support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

TECHNOLOGY SKILLS NECESSARY FOR THIS SPECIFIC COURSE

- Basic computer and web-browsing skills
- Basic word processing and spreadsheet skills
- Navigating Carmen: for questions about specific functionality, see the [Canvas Student Guide](#).

REQUIRED EQUIPMENT

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone

REQUIRED SOFTWARE

- **Access to SPSS Software on Laptop or Desktop (free access for students):** It is strongly recommended that you obtain a copy of SPSS software from the IT Service Desk website (<https://osuitsm.service-now.com/selfservice/>). On the IT Service Desk website, sign in to your account and then click on order services. Select software services and then click on site

licensed software request. Confirm your information and click next. From the list of available software, select **SPSS Statistics**. You will then have a choice between versions of SPSS for Windows or Macintosh. Complete the download process according to your device. Once completed, you will need to open the software to license it. The product license number will be sent to you in an email from IT.

- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through [Microsoft's Student Advantage program](#). Full instructions for downloading and installation is found <https://ocio.osu.edu/kb04733>.

CARMEN ACCESS

You will need to use [BuckeyePass](#) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](#) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click "Enter a Passcode" and then click the "Text me new codes" button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the [Duo Mobile application](#) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.
- All documents provided in Carmen will be .doc, .pdf, or .sav (SPSS data files)

LockDown Browser Requirement

This course requires the use of LockDown Browser for online exams. Watch this video to get a basic understanding of LockDown Browser:

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

Download Instructions

Download and install LockDown Browser from this link:

<https://download.respondus.com/lockdown/download.php?id=462913331>

Once Installed

- Start LockDown Browser
- Log into to Canvas
- Navigate to the quiz

Note: You won't be able to access a quiz that requires LockDown Browser with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.

Guidelines

When taking an online quiz, follow these guidelines:

- Select a location where you won't be interrupted
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it
- Turn off all mobile devices, phones, etc. and don't have them within reach
- Clear your area of all external materials - books, papers, other computers, or devices
- Remain at your desk or workstation for the duration of the test
- LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted

Getting Help

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- Respondus has a Knowledge Base available from support.respondus.com. Select the "Knowledge Base" link and then select "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product
- If you're still unable to resolve a technical issue with LockDown Browser, go to support.respondus.com and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATERGORY	POINTS
Lab Assignments	300
Quizzes/Statistical Procedure Assignment	275
Lab Attendance	100
Exams (3 x 100 pts each)	300
Final Project	100

Total	1075
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Assignment Overview

1. Lab Assignments (OC1, OC2)

- Lab assignments will consist of SPSS outputs and interpretations of descriptive and inferential statistics.
- Lab assignments must be typed and submitted to the appropriate assignment folder on Carmen.
- Lab time will typically be provided to work on assignments but is not guaranteed.
- Lab assignments will consist of two portions: in lab and out of lab. All lab assignments are due exactly one week after they are assigned within your respective lab section.

2. Quizzes/Statistical Procedure Assignments (OC1, OC2)

- Quizzes and Statistical Procedure Assignments will be given periodically during online lessons and are expected to be completed individually, without the assistance of others.
- There will be a minimum of 10 quizzes/assignments given.
- Quizzes and assignments will be due to Carmen the Sunday of each module
- Quizzes will be completed through the use of a LockDown Browser
- Assignments will be checked for plagiarism

3. Lab Attendance

- Students are expected to attend all lab sessions
 - If a student is sick, an alternative lab attendance assignment will be provided to make up missed attendance points.
 - Documentation is required to complete the alternative lab attendance assignment

4. Exams (OC1, OC2, OC3)

- Three exams will be given during the semester
- Exams will be administered through Carmen and will be completed with a LockDown Browser. Exams are expected to be completed individually, without the assistance of others.
- Exams will be checked for plagiarism

5. Final Project (OC1, OC2, OC3)

- Students will complete a final project which explores the use of statistics within the agricultural industry. Given a pre-existing data set students will analysis and report data.

Late and make-up assignments

Quizzes, Statistical Procedure and Lab assignments will be accepted up to four days after the due date with a 20% grade reduction each day the assignment is late. In the case of illness or emergency, the student is expected to notify the instructor prior to the absence or as soon as possible. In these instances, an extension may be proved.

Exams CANNOT be made up, except for extenuating circumstances. If an exam will be missed the student is expected to notify the instructor prior to the absence or as soon as possible in the case of an unforeseen emergency. If the absence is deemed as acceptable, the instructor and student will make arrangements to make up the exam.

Grading scale

A	94 - 100
A-	90 - 93
B+	87 - 89
B	84 - 86
B-	80 - 83
C+	77 - 79
C	74 - 76
C-	70 - 73
D+	66 - 69
D	60 - 65
E	< 60

Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call 614-688-HELP at any time if you have a technical problem.)

- **Grading and feedback:** For lab assignments, you can generally expect feedback within 7 days.
- **E-mail:** I will reply to e-mails within 36 hours on school days. Emails received over the weekend will be addressed Monday morning.
- **Discussion board:** I will check and reply to messages in the discussion boards with 48 hours of their due dates.

PARTICIPATION AND ATTENDANCE

Student participation requirements

Participation and attendance are important. Students are expected to engage in and be active participants in both the recorded lessons and lab. Attendance in lab is expected and no “free” absences are provided for missed lab sections. In the case of emergency/illness, students should contact the instructor as soon as possible. The instructor will consider situations on a case-by-case basis with documentation, and accommodations will be made at the discretion of the instructor.

OTHER COURSE POLICIES

OHIO STATE’S ACADEMIC INTEGRITY POLICY

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

Even in an online learning environment, students are expected to maintain academic integrity and follow the expectations outlined in the assignment overview (see above). If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an environment free from harassment, discrimination, and sexual misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

This course adheres to The Principles of Community adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can also be found at <https://go.osu.edu/principlesofcommunity>.

For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://equityandinclusion.cfaes.ohio-state.edu/>). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at <https://studentlife.osu.edu/bias/report-a-bias-incident.aspx>.

Your mental health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALK or at suicidepreventionlifeline.org.

David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

Safe and Healthy Buckeyes

Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes wearing a face mask in any indoor space and maintaining a safe physical distance at all times. Non-compliance will result in a warning first, and disciplinary actions will be taken for repeated offenses.”

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request

COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Carmen (Canvas) accessibility
- Streaming audio and video

LECTURE MODULE and RECORDED LESSON CALENDAR (Subject to Change)

Week	Module	Lessons	Readings/Notes	Quizzes/Assignments
Week 1	Introduction	<ul style="list-style-type: none"> ◆ Introduction to Statistics ◆ Introduction to Research and The Role Statistical Reasoning Plays 	<ul style="list-style-type: none"> ◆ Ch. 1 ◆ Stat. Reason Ch. 2 (Carmen) 	◆ Module 1 Quiz (OC3)
Week 2	Participants and Data	<ul style="list-style-type: none"> ◆ Population, Sampling, and Probability ◆ Data and Variables 	<ul style="list-style-type: none"> ◆ Stat. Reason p. 28-29 & Ch. 4 (Carmen) ◆ Ch. 2: p. 32-33 ◆ Measurement (Carmen) 	◆ Module 2 Quiz (OC1a, OC1b)
Week 3	Descriptive Statistics	<ul style="list-style-type: none"> ◆ Measures of Central Tendency ◆ Understanding Variability 	<ul style="list-style-type: none"> ◆ Ch. 2: P. 21– 32 ◆ Ch. 3 	<ul style="list-style-type: none"> ◆ Central Tend. Quiz (OC2a) ◆ Variability Asgmt (OC2a)
Week 4	Exam	Exam #1 – [Date] (OC1, OC2, OC3)		
Week 5	Data Visualization	◆ Data Visualization	◆ Ch. 4	◆ Module 5 Quiz (OC1c, OC3)
Week 6	Data Distribution	<ul style="list-style-type: none"> ◆ Normal Distribution ◆ Z Scores 	◆ Ch. 8	◆ Module 6 Quiz (OC1)
Week 7	Inferential Statistics: Correlation	<ul style="list-style-type: none"> ◆ Significance ◆ Correlation 	◆ Ch. 5, 9, & 15	◆ Correlations Asgmt (OC2b)
Week 8	Inferential Statistics: Simple Regression	◆ Simple Linear Regression	◆ Ch. 16	◆ SLR Assignment (OC2b)
Week 9	Exam	Exam #2 – [Date] (OC1, OC2, OC3)		
Week 10	Hypothesis Testing	<ul style="list-style-type: none"> ◆ Introduction to Hypothesis Testing ◆ <i>t</i>-Test: Hypothesis Testing 	◆ Ch 7	◆ Module 10 quiz (OC1, OC3)
Week 11	<i>t</i> -tests	◆ <i>t</i> -Test: One Sample (and Z-Test)	◆ Ch. 10	◆ One Sample Asgmt (OC2b)
Week 12	<i>t</i> -tests	◆ <i>t</i> -Test: Two Independent Samples	◆ Ch. 11	◆ Ind. Sample Asgmt (OC2b)
Week 13	<i>t</i> -tests	◆ <i>t</i> -Test: Two Dependent Samples	◆ Ch. 12	◆ Dep. Sample Asgmt (OC2b)
Week 14	Exam	Exam #3 – [Date] (OC1, OC2, OC3)		
Final Project Due: [Date] by [Time] (OC1, OC2, OC3)				

LAB SCHEDULE (Subject to Change)

Week #	Dates	Lab #	Content/Notes	Due
1	[Lab Dates]	1	Introduction to the Course (OC1)	
2	[Lab Dates]	2	Introduction to SPSS (OC1)	Read: Appendix A before lab
3	[Lab Dates]	3	Introduction to SPSS (Cont.) & Final Project (OC1)	
4	[Lab Dates]	4	Central Tendency, Variability, and Descriptive Statistics (OC2a)	SPSS Lab Assignment
5	[Lab Dates]	5	Descriptive Statistics (Continued) (OC2a)	
6	[Lab Dates]	6	Data Visualization (OC1c, OC3)	Descriptive Stats Lab Assignment
7	[Lab Dates]	7	Significance and Assumption Testing	Data Visualization Lab Assignment
8	[Lab Dates]	8	Correlation (OC2b)	
9	[Lab Dates]	9	Regression (OC2b)	Correlation Lab Assignment
10	[Lab Dates]	10	Lecture and Lab Check-in	Regression Lab Assignment
11	[Lab Dates]	11	t -Tests 9 (OC2b)	
12	[Lab Dates]	No Labs	No Labs	
13	[Lab Dates]	12	t -Tests (continued) (OC2b)	
14	[Lab Dates]	13	Final Project Work Time (OC1, OC2, OC3)	T-Test Lab Assignment

College of Agriculture, Food, and Environmental Science

Department of Agricultural Communication, Education, and Leadership

COURSE INSTRUCTOR

SYLLABUS

COMLDR 3537

Data Analysis in Applied Sciences

[Term and Year]

COURSE OVERVIEW

Course Time and Location

Lecture: Monday and Wednesday 9:20 am – 10:10 am; Ag Admin Bldg 246

Lab: #1—Wednesday: 10:20 am to 12:25 pm; Ag Admin Bldg 005

#2—Wednesday: 12:40 pm to 2:45 pm; Ag Admin Bldg 005

#3—Thursday: 12:40 pm to 2:45 pm; Ag Admin Bldg 005

Instructor

Instructor: Dr. Amanda Bowling

Email address: bowling.175@osu.edu

Phone number: 614-688-1121

Office location: 200F Ag Admin Bldg.

Office hours: Mondays 11:00 am to 1:00 pm or by appointment

Teaching Assistant

TA: [Name]

Email address: [Email]

Office location: [Office]

Office hours: by appointment

Course Description

A general education course focused on developing quantitative literacy and logical reasoning through analysis and interpretation of descriptive and inferential statistics. Students will be able to utilize SPSS to perform statistical data analysis, organize and summarize quantitative data, formulate conclusions, and critically evaluate research reports.

Credit Hours

3 Hours

Prerequisites

Math 1130 or 1148

General Education Data Analysis Course Goals

Students develop skills in drawing conclusions and critically evaluating results based on data.

General Education Data Analysis Expected Learning Outcomes

- OC1 – Students understand basic concepts of statistics and probability. (3000-4000)
 - OC1a – Identify basic statistical concepts. (1000-2000)
 - OC1b – Describe probability and the role probability plays in statistics. (2000-3000)
 - OC1c – Apply basic statistical concepts and probability to analyze and interpret data. (3000-4000)
- OC2 – Students comprehend methods needed to analyze and critically evaluate statistical arguments. (2000-3000)
 - OC2a – Summarize data using descriptive statistics. (2000-3000)
 - OC2b – Infer from a sample to a population using inferential statistics. (2000-3000)
 - OC2c – Given a research problem and data set, select the appropriate statistical methods to analyze and interpret data. (2000-3000)
- OC3 – Students recognize the importance of statistical ideas. (1000-2000)

Course Experiences to Fulfill Learning Outcomes

Core requirements:

- Notions of probability. The axioms of probability, and basic probability calculations. Random variables, and probability calculations using random variables. Expected values.
- Basics of statistical inference. Moving from a sample to a population. Bias and variance. Understanding the margin of error and confidence. The logic of statistical testing. The misuse of statistics.

Additional requirements:

- Summarizing data graphically and numerically. Discriminating between good and bad summaries. Understanding the advantages and disadvantages of a given summary.
- Methods of statistical inference. Statistical testing. Constructing confidence intervals. Making quantitative statistical arguments using data. Understanding and verifying assumptions underlying a given inference.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

REQUIRED

- Salkind, N. J. (2016). *Statistics for people who (think they) hate statistics, 7th Edition*. Sage Publications.

Other requirements

- **Calculator:** A “basic” or scientific calculator which can perform the following functions: add, subtract, multiply, divide, and square root. *Graphing or programmable* calculators and cell phones are not approved for COMLDR 3537 and will not be allowed during in class activities, quizzes, or exams.

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact OSU IT Service Desk. Standard support hours are available at <http://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat Support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)

- Email: 8help@osu.edu
- TDD: 614-688-8743

TECHNOLOGY SKILLS NECESSARY FOR THIS SPECIFIC COURSE

- Basic computer and web-browsing skills
- Basic word processing and spreadsheet skills
- Navigating Carmen: for questions about specific functionality, see the [Canvas Student Guide](#).

REQUIRED SOFTWARE

- **Access to SPSS Software:** It is strongly recommended that you obtain a copy of SPSS software from the IT Service Desk website (<https://osuitsm.service-now.com/selfservice/>). On the IT Service Desk website, sign in to your account and then click on order services. Select software services and then click on site licensed software request. Confirm your information and click next. From the list of available software, select **SPSS Statistics**. You will then have a choice between versions of SPSS for Windows or Macintosh. Complete the download process according to your device. Once completed, you will need to open the software to license it. The product license number will be sent to you in an email from IT.
- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through [Microsoft's Student Advantage program](#). Full instructions for downloading and installation is found <https://ocio.osu.edu/kb04733>.

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATERGORY	POINTS
Lab Assignments	300
Quizzes	275
Attendance/Participation	100
Assigned Lesson for Note Taking	25
Exams (3 x 100 pts each)	300
Final Project	100
Total	1100

Assignment Overview

1. Lab Assignments (OC1, OC2)

- Lab assignments will consist of SPSS outputs and interpretations of descriptive and inferential statistics.
- Lab assignments must be typed and submitted to the appropriate assignment folder on Carmen.
- Lab time will typically be provided to work on assignments, but is not guaranteed.
- Lab assignments are due exactly one week after they are assigned within your respective lab section.

2. Quizzes (OC1, OC2)

- Quizzes will be given periodically during lecture and may or may not be announced during the previous lecture.
- There will be a minimum of 10 quizzes given in lecture.
- All quizzes will have a time limit.
- No make-up quizzes will be allowed without appropriate documentation and prior approval from the professor.
- If a quiz is given at the beginning of class and a student is more than 10 minutes late to class, they will not be able to make up the quiz.
- If a quiz is given at the beginning of class and a student is less than 10 minutes late to class, they will be able to take the quiz but will turn in the quiz when the last student who was on time is finished

3. Attendance and Participation

- Students are expected to attend and be active participants in both lecture and lab.
- Students are allowed two lecture absences without a grade deduction. Any absences beyond the two provided will result in a grade deduction.

4. Assigned Lesson for Note Taking

- Students will be assigned one lesson to take and submit notes for.
- The notes will need to be as complete as possible, well organized, and legible.
- Students are not expected to take word for word notes but are encouraged to paraphrase and summarize. Students are also encouraged to add additional comments which help with understanding concepts.
- Notes will be submitted electronically through Carmen. Submissions could either include a typed word document or a scanned pdf of handwritten notes.

- The note taking assignment will be due by 5:00 pm the day following the assigned lesson.
- Late submissions will be accepted up to four days after the due date with a 20% grade reduction each day the assignment is late.
- If a student is absent on their assigned day, no make-up will be allowed unless prior approval is given.
- This assignment is in no way intended to deter other students from taking notes but should be used as a supplement as lecture PowerPoints will not be distributed.

5. Exams (OC1, OC2, OC3)

- Three exams will be given during the semester
- A student will not be permitted to take an exam if they are more than 20 minutes late to lecture on the day of the exam

6. Final Project (OC1, OC2, OC3)

- Students will complete a final project which explores the use of statistics within the agricultural industry. Given a pre-existing data set students will analysis and report data.

Late and make-up assignments

Lab assignments are due exactly one week after they are assigned. Late lab assignments will be accepted up to four days after the due date with a 20% grade reduction each day the assignment is late. Quizzes cannot be made up without appropriate documentation and prior approval. In the case of illness or emergency, the student is expected to notify the instructor prior to the absence or as soon as possible. In these instances, an extension may be proved.

Exams CANNOT be made up, except for extenuating circumstances. If an exam will be missed the student is expected to notify the instructor prior to the absence. If the absence is deemed as acceptable, the instructor and student will make arrangements to make up the exam.

Grading scale

A	94 - 100
A-	90 - 93
B+	87 - 89
B	84 - 86
B-	80 - 83
C+	77 - 79
C	74 - 76
C-	70 - 73
D+	66 - 69

D 60 - 65
E < 60

Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call 614-688-HELP at any time if you have a technical problem.)

- **Grading and feedback:** For lab assignments, you can generally expect feedback within 7 days.
- **E-mail:** I will reply to e-mails within 36 hours on school days. Emails received over the weekend will be addressed Monday morning.
- **Discussion board:** I will check and reply to messages in the discussion boards with 24 hours of their due dates.

PARTICIPATION AND ATTENDANCE

Student participation requirements

Attendance is important. Students are expected to attend and be active participants in both lecture and lab. However, instances arise where an absence cannot be avoided, thus students are allowed two lecture absences without a grade deduction. Attendance in lab is expected and no “free” absences are provided for missed lab sections.

OTHER COURSE POLICIES

OHIO STATE’S ACADEMIC INTEGRITY POLICY

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying

the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct. If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

Even in an online learning environment, students are expected to maintain academic integrity and follow the expectations outlined in the assignment overview (see above). If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an environment free from harassment, discrimination, and sexual misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

This course adheres to The Principles of Community adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can also be found at <https://go.osu.edu/principlesofcommunity>. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://equityandinclusion.cfaes.ohio-state.edu/>). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at <https://studentlife.osu.edu/bias/report-a-bias-incident.aspx>.

Your mental health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALK or at suicidepreventionlifeline.org.

David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

Safe and Healthy Buckeyes

Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes wearing a face mask in any indoor space and maintaining a safe physical distance at all times. Non-compliance will result in a warning first, and disciplinary actions will be taken for repeated offenses.”

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Carmen (Canvas) accessibility

Streaming audio and video

LECTURE CALENDAR (Subject to Change)

Date	Lecture	Readings/Notes	Note Taker(s)
Date	Introduction of Course		
Date	Introduction to Statistics	-Ch. 1	
Date	Introduction to Research and The Role Statistical Reasoning Plays	-Stat. Reason Ch. 2 (Carmen)	
Date	Population, Sampling, and Probability	-Stat. Reason p.28-29 (Carmen)	
Date	No Class		
Date	Data and Variables	-Ch. 2: p. 32-33 -Stat. Reason Ch. 4 (Carmen) -Measurement (Carmen)	
Date	Averages and Measures of Central Tendency	-Ch. 2: P. 21 - 32	
Date	Understanding Variability	-Ch. 3	
Date	Normal Distribution	-Ch. 8	
Date	Self-Study—Data Visualization	-Ch. 4	
Date	Self-Study—Data Visualization		
Date	Z Scores		
Date	Exam #1(OC1, OC2, OC3)		
Date	Significance	-Ch. 9	
Date	Correlations	-Ch. 5 & Ch. 15	
Date	Correlations		
Date	Simple Regression	-Ch. 16	
Date	Simple Regression		
Date	No Class		
Date	No Class		
Date	Introduction to Hypothesis Testing	-Ch. 7	
Date	Introduction to Hypothesis Testing		
Date	Exam #2(OC1, OC2, OC3)		
Date	t-Test: Hypothesis Testing		
Date	t-Test: One Sample (and Z-Test)	-Ch. 10	
Date	t-Test: One Sample (and Z-Test)		
Date	t-Test: Two Independent Samples	-Ch. 11	
Date	t-Test: Two Independent Samples		
Date	t-Test: Two Dependent (Matched) Samples	-Ch. 12	
Date	Analysis of Variance	-Ch. 13	
Date	Exam #3(OC1, OC2, OC3)		
Final: Final Project will be due [date and time]			

LAB SCHEDULE (Subject to Change)

Week #	Dates	Lab #	Content/Notes	Due
1	Dates	1	Introduction to the Course (OC1)	
2	Dates	2	Introduction to SPSS (OC1)	Read: Appendix A before lab
3	Dates	3	Introduction to SPSS (Cont.) & Final Project (OC1)	
4	Dates	4	Central Tendency, Variability, and Descriptive Statistics (OC2a)	SPSS Lab Assignment
5	Dates	6	Descriptive Statistics (Continued) (OC2a)	
6	Dates	7	Data Visualization (OC1c, OC3)	Descriptive Stats Lab Assignment
7	Dates	8	Significance and Assumption Testing	Data Visualization Lab Assignment
8	Dates	9	Correlation (OC2b)	
9	Dates	10	Regression (OC2b)	Correlation Lab Assignment
10	Dates	No Labs	No Labs	Regression Lab Assignment
11	Dates	11	<i>t</i> -Tests 9 (OC2b)	
12	Dates	No Labs	No Labs	
13	Dates	12	<i>t</i> -Tests (continued) (OC2b)	
14	Dates	13	Final Project Work Time (OC1, OC2, OC3)	T-Test Lab Assignment

Data Analysis

COMLDR 3537 Data Analysis in Applied Sciences Assessment Plan

A GE assessment plan explains how the faculty teaching the course will assess the effectiveness of the course in achieving the GE expected learning outcomes over time, rather than how individual student grades will be assessed.

For Data Analysis, complete the following table to show how the faculty will assess the two expected learning outcomes. Then, in an appendix, provide one or more specific example(s) for each assessment method you will use.

GE Expected Learning Outcomes	Methods of Assessment <i>*Direct methods are required. Additional indirect methods are encouraged.</i>	Level of student achievement expected for the GE ELO. <i>(for example, define percentage of students achieving a specified level on a scoring rubric)</i>	What is the process that will be used to review the data and potentially change the course to improve student learning of GE ELOs?
<p><u>ELO 1</u></p> <p>Students understand basic concepts of statistics and probability.</p>	<p>Direct Methods— course embedded questions</p> <p>Direct Methods— standardized quizzes</p> <p>Direct Methods—Lab based analysis assignments</p> <p>Direct Methods— standardized exams</p> <p>Indirect—questions to gauge student expectations, goals, and learning</p>	<p>75% of students answer the in-class question(s) correctly</p> <p>80% of students receive 80% or higher on quizzes</p> <p>75% of students receive 75% or higher on assignments</p> <p>80% of students receive 75% or higher on exams</p>	<p>Question responses will be formatively evaluated immediately, to make time and place instructional changes.</p> <p>Inquiry activity, quiz, and lab assignment scores will be evaluated based on total class percentage and trends indicating misconceptions. Any identified misconceptions will be addressed at the next contact point with students through altered instructional methods.</p>
<p><u>ELO 2</u></p> <p>Students comprehend methods needed to analyze and critically evaluate statistical arguments.</p>	<p>Direct Methods— course embedded questions</p> <p>Direct Methods—Final Project</p>	<p>75% of students answer the in-class question(s) correctly</p> <p>85% of students receive 85% or higher on final project rubric</p>	<p>Question responses will be formatively evaluated immediately, to make time and place instructional changes.</p> <p>Inquiry activity, quiz, and lab assignment scores will be evaluated based on total class percentage and trends indicating misconceptions. Any identified misconceptions will be addressed at the next contact point with students through altered instructional methods.</p>

	<p>Direct Methods—Lab based analysis assignments</p> <p>Direct Methods—standardized quizzes</p> <p>Direct Methods—standardized exams</p> <p>Indirect—questions to gauge student expectations, goals, and learning</p>	<p>80% of students receive 80% or higher on quizzes</p> <p>75% of students receive 75% of higher on assignments</p> <p>80% of students receive 75% or higher on exams</p>	<p>Exam scores will be evaluated based on total class percentage, mean, median, skewness, and trends indicating misconceptions. Any identified misconceptions will be addressed at the next contact point with students through altered instructional methods.</p>
<p>ELO 3</p> <p>Students recognize the importance of statistical ideas.</p>	<p>Direct Methods—course embedded questions</p> <p>Direct Methods—standardized quizzes</p> <p>Direct Methods—standardized exams</p> <p>Indirect—questions to gauge student expectations, goals, and learning</p>	<p>75% of students answer the in-class question(s) correctly.</p> <p>80% of students receive 80% or higher on quizzes</p> <p>80% of students receive 75% or higher on exams</p>	<p>Responses to the questions posed to gauge student expectations, goals, and learning will direct the ways in which statistical and mathematic based procedures and concepts are delivered</p>

***Direct Methods** assess student performance related to the expected learning outcomes. Examples of direct assessments are course-embedded questions; pre/post test; standardized exams; portfolio evaluation; videotape/audiotape of performance; rubric-based evaluation of student work.

***Indirect Methods** assess opinions or thoughts about student knowledge, skills, attitudes, learning experiences, and perceptions. Examples of indirect measures are student surveys about instruction; focus groups; student self-evaluations.

Agri Comm, Educ & Leadership	COMLDR 3537	Niewoehner-Green		
General Standards	Type	Points	Found	Consider Revising
Specific Review Standards				
General Standard 1 – Course Overview and Introduction The overall design of the course is made clear to the learner at the beginning of the course. The course overview and introduction set the tone for the course, let learners know what to expect, and provide guidance to ensure learners get off to a good start.				
1.1 Instructions make clear how to get started and where to find various course components.	Essential	3	Found	No
a. School/Academic Area			Found	No
b. Course Number, Title, Level, and Credit Hour			Found	No
c. Instructor Name			Found	No
d. Instructor Contact Information.			Found	No
e. Office Hours (Location/Days/Times)			Found	No
1.2 Learners are introduced to the purpose and structure of the course.	Essential	3	Found	No
a. Primary goals of the academic unit/College/University			Found	No
b. Course Catalog description			Not Found	Yes
c. Explain how courses will achieve these goals			Not Found	Yes
1.3 Communication expectations for online discussions, email, and other forms of interaction are clearly stated.	Very Important	2	Found	No
1.4 Course and institutional policies with which the learner is expected to comply are clearly stated within the course, or a link to current policies is provided.	Very Important	2	Found	No
a. Academic Integrity (Academic Misconduct)			Found	No
b. Office of Disability Services Statement			Found	No
c. Diversity Statement			Found	No
d. Grievances statement			Not Found	Yes
e. Mental Health Statement			Found	No
f. Statement of Student Rights http://ods.osu.edu			Not Found	No
g. Intellectual Property			Not Found	Yes
i. Course Audio and Video Recording Video			Not Found	Yes
ii. Student Generated materials			Not Found	Yes
iii. Course materials			Not Found	Yes
1.5 Minimum technology requirements for the course are clearly stated, and information on how to obtain the technologies is provided.	Very Important	2	Found	No
1.6 Computer skills and digital information literacy skills expected of the learner are clearly stated.	Important	1	Found	No
a. Courses that this course is a prerequisite			Found	No
b. Courses in other academic units (college, university)			Found	No
1.7 Expectations for prerequisite knowledge in the discipline and/or any required competencies are clearly stated.	Important	1	Not Found	Yes
General Standard 2 – Learning Objectives (Competencies) Learning objectives or competencies describe what learners will be able to do upon completion of the course. The learning objectives or competencies establish a foundation upon which the rest of the course is based.				
2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable.	Essential	3	Found	No

2.3 Learning objectives or competencies are stated clearly, are written from the learner's perspective, and are prominently located in the course.	Essential	3	Found	No
2.4 The relationship between learning objectives or competencies and learning activities is clearly stated.	Essential	3	Found	No
2.5 The learning objectives or competencies are suited to the level of the course.	Essential	3	Found	No
General Standard 3 – Assessment and Measurement Assessments are integral to the learning process and are designed to evaluate learner progress in achieving the stated learning objectives or mastering the competencies. Assessment is implemented in a manner that corresponds to the course learning objectives or competencies and not only allows the instructor a broad perspective on the learners' mastery of content but also allows learners to track their learning progress throughout the course.				
3.1 The assessments measure the achievement of the stated learning objectives or competencies.	Essential	3	Found	No
3.2 The course grading policy is stated clearly at the beginning of the course.	Essential	3	Found	No
a. Letter Grades/Grading Breakdown			Found	No
b. Late Work: Outline your policy for late work clearly			Found	No
c. Make-up Exams: Under what conditions will students be permitted to take a make-up exam?			Found	No
3.3 Specific and descriptive criteria are provided for the evaluation of learners' work, and their connection to the course grading policy is clearly explained.	Very Important	2	Found	No
3.4 The assessments used are sequenced, varied, and suited to the level of the course.	Very Important	2	Found	No
3.5 The course provides learners with multiple opportunities to track their learning progress with timely feedback.	Very Important	2	Found	No
General Standard 4 – Instructional Materials Instructional materials enable learners to achieve stated learning objectives or competencies. The focus of this Standard is on supporting the course objectives and competencies, rather than on qualitative judgments about the instructional materials.				
4.2 The relationship between the use of instructional materials in the course and completing learning activities is clearly explained.	Essential	3	Found	No
4.3 The course models the academic integrity expected of learners by providing both source references and permissions for use of instructional materials.	Very Important	2	Found	No
4.4 The instructional materials represent up-to-date theory and practice in the discipline.	Very Important	2	Found	No
4.5 A variety of instructional materials is used in the course.	Very Important	2	Found	Yes
General Standard 5 – Learning Activities and Learner Interaction Course activities facilitate and support learner interaction and engagement. Course components that promote active learning contribute to the learning process and to learner persistence.				
5.3 The instructor's plan for interacting with learners during the course is clearly stated.	Essential	3	Found	No
a. The university's official mode of communication is via university email.			Not Found	Yes
b. How do you expect students to address you, and how should they begin their emails?			Not Found	Yes
c. Exam proctoring – provide students with clear statements on the use of a proctoring service and provide them a chance to practice taking an exam with that proctoring service.			Found	No
5.4 The requirements for learner interaction are clearly stated.	Very Important	2	Found	No
a. Clearly state how long students can expect to wait until they receive an email response from you after they have contacted you via email.			Found	No
b. Remind students to avoid colors like red and green for accessibility reasons.			Not Found	Yes
General Standard 6 – Course Technology Course technologies support learners' achievement of course objectives or competencies. The technologies enabling the various course components facilitate rather than impede the learning process.				
6.3 A variety of technology is used in the course.	Important	1	Found	No
General Standard 7 – Learner Support The course facilitates learner access to institutional support services essential to learner success. It is important to ensure online learners know they have access to and are encouraged to use the services that support learners at the institution. In the Learner Support Standard, four different kinds of support services are addressed: technical support, accessibility support, academic services support, and student services support.				

7.1 The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.	Essential	3	Found	No
7.2 Course instructions articulate or link to the institution's accessibility policies and services.	Essential	3	Found	No
7.3 Course instructions articulate or link to the institution's academic support services and resources that can help learners succeed in the course.	Essential	3	Found	No
7.4 Course instructions articulate or link to the institution's student services and resources that can help learners succeed.	Important	1	Not Found	No
General Standard 8 – Accessibility* and Usability The course design reflects a commitment to accessibility and usability for all learners. The course design reflects a commitment to accessibility, so that all learners can access all course content and activities, and to usability, so that all learners can easily navigate and interact with course components.				
8.6 Vendor accessibility statements are provided for all technologies required in the course.	Very Important	2	Not Found	No

Essential	13	60	13	0
Very Important	10	60	10	1
Important	4		2	1

63

61

Must have all Essential specific standards	39	13 / 13
<i>Must have 85% of 63 which is</i>	54	61

Review Details

Syllabus Review - QM Details
COMLDR 3537

Niewoehner-Green
Agri Comm, Educ & Leadership
General Standards

Specific Review Standards

General Standard 1 – Course Overview and Introduction The overall design of the course is made clear to the learner at the beginning of the course. The course overview and introduction set the tone for the course, let learners know what to expect, and provide guidance to ensure learners get off to a good start.

1.1 Instructions make clear how to get started and where to find various course components.

	Found	Page	Consider Revising	Notes
R1	Found	1	No	
R2				
R3				
R4				

a. School/Academic Area

	Found	Page	Consider Revising	Notes
R1	Found	1	No	
R2				
R3				
R4				

b. Course Number, Title, Level, and Credit Hour

	Found	Page	Consider Revising	Notes
R1	Found	1-2	No	
R2				
R3				
R4				

c. Instructor Name

	Found	Page	Consider Revising	Notes
R1	Found	1	No	
R2				
R3				
R4				

d. Instructor Contact Information.

	Found	Page	Consider Revising	Notes
R1	Found	1	No	
R2				
R3				
R4				

e. Office Hours (Location/Days/Times)

	Found	Page	Consider Revising	Notes
R1	Found	1	No	
R2				
R3				
R4				

1.2 Learners are introduced to the purpose and structure of the course.

	Found	Page	Consider Revising	Notes
R1	Found	2	No	Consider adding the official course description.

R2
R3
R4

a. Primary goals of the academic unit/College/University

	Found	Page	Consider Revising	Notes
R1	Found	2	No	This can be part of the Outcomes but consider adding a generalized statement of how this goal will be achieved. This can be done with statements of how the quizzes, labs, exams and final project related to this goal and to the Outcomes.

R2
R3
R4

b. Course catalog description

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	

R2
R3
R4

c. Explain how courses will achieve these goals

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	

R2
R3
R4

1.3 Communication expectations for online discussions, email, and other forms of interaction are clearly stated.

	Found	Page	Consider Revising	Notes
R1	Found	8	No	

R2
R3
R4

1.4 Course and institutional policies with which the learner is expected to comply are clearly stated within the course, or a link to current policies is provided.

	Found	Page	Consider Revising	Notes
R1	Found	11-12	No	

R2
R3
R4

a. Academic Integrity (Academic Misconduct)

	Found	Page	Consider Revising	Notes
R1	Found	9	No	

R2
R3
R4

b. Office of Disability Services Statement

	Found	Page	Consider Revising	Notes
R1	Found	11	No	

R2
R3
R4

c. Diversity Statement

	Found	Page	Consider Revising	Notes
R1	Found	10	No	
R2				
R3				
R4				

d. Grievances statement

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	Consider adding this from the College Template
R2				
R3				
R4				

e. Mental Health Statement

	Found	Page	Consider Revising	Notes
R1	Found	10-11		Consider adding this from the College Template
R2				
R3				
R4				

f. Statement of Student Rights <http://ods.osu.edu>

	Found	Page	Consider Revising	Notes
R1	Not Found			Consider adding this from the College Template
R2				
R3				
R4				

g. Intellectual Property

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	Consider adding this from the College Template
R2				
R3				
R4				

i. Course Audio and Video Recording Video

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	Consider adding this from the College Template
R2				
R3				
R4				

ii. Student Generated materials

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	Consider adding this from the College Template
R2				
R3				
R4				

iii. Course materials

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	Consider adding this from the College Template
R2				
R3				
R4				

1.5 Minimum technology requirements for the course are clearly stated, and information on how to obtain the technologies is provided.

	Found	Page	Consider Revising	Notes
R1	Found	4	No	
R2				
R3				
R4				

1.6 Computer skills and digital information literacy skills expected of the learner are clearly stated.

	Found	Page	Consider Revising	Notes
R1	Found	4	No	
R2				
R3				
R4				

a. Courses that this course is a prerequisite

	Found	Page	Consider Revising	Notes
R1	Found	4	No	
R2				
R3				
R4				

b. Courses in other academic units (college, university)

	Found	Page	Consider Revising	Notes
R1	Found	1	No	
R2				
R3				
R4				

1.7 Expectations for prerequisite knowledge in the discipline and/or any required competencies are clearly stated.

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	Is this course a prerequisite for any other course or programs?
R2				
R3				
R4				

General Standard 2 – Learning Objectives (Competencies) Learning objectives or competencies describe what learners will be able to do upon completion of the course. The learning objectives or competencies establish a foundation upon which the rest of the course is based.

2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable.

	Found	Page	Consider Revising	Notes
R1	Found	2	No	
R2				
R3				
R4				

2.3 Learning objectives or competencies are stated clearly, are written from the learner’s perspective, and are prominently located in the course.

	Found	Page	Consider Revising	Notes
R1	Found	2	No	
R2				
R3				
R4				

2.4 The relationship between learning objectives or competencies and learning activities is clearly stated.

	Found	Page	Consider Revising	Notes

R1	Found	13-14	No	
R2				
R3				
R4				
2.5 The learning objectives or competencies are suited to the level of the course.				
	Found	Page	Consider Revising	Notes
R1	Found	2	No	Understand may be application. If this is so it is 3000-4000, comprehend is 200-3000 (okay) and recognize is 1000-2000. The Outcomes fall within normal levels
R2				
R3				
R4				

General Standard 3 – Assessment and Measurement Assessments are integral to the learning process and are designed to evaluate learner progress in achieving the stated learning objectives or mastering the competencies. Assessment is implemented in a manner that corresponds to the course learning objectives or competencies and not only allows the instructor a broad perspective on the learners’ mastery of content but also allows learners to track their learning progress throughout the course.

3.1 The assessments measure the achievement of the stated learning objectives or competencies.

	Found	Page	Consider Revising	Notes
R1	Found	7,13	No	
R2				
R3				
R4				

3.2 The course grading policy is stated clearly at the beginning of the course.

	Found	Page	Consider Revising	Notes
R1	Found	6	No	
R2				
R3				
R4				

a. Letter Grades/Grading Breakdown

	Found	Page	Consider Revising	Notes
R1	Found	6	No	
R2				
R3				
R4				

b. Late Work: Outline your policy for late work clearly

	Found	Page	Consider Revising	Notes
R1	Found	6	No	
R2				
R3				
R4				

c. Make-up Exams: Under what conditions will students be permitted to take a make-up exam?

	Found	Page	Consider Revising	Notes
R1	Found	6	No	
R2				
R3				
R4				

3.3 Specific and descriptive criteria are provided for the evaluation of learners’ work, and their connection to the course grading policy is clearly explained.

	Found	Page	Consider Revising	Notes
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R1 Found 6-7 No
 R2
 R3
 R4

3.4 The assessments used are sequenced, varied, and suited to the level of the course.

	Found	Page	Consider Revising	Notes
--	-------	------	-------------------	-------

R1 Found 6-7 No
 R2
 R3
 R4

3.5 The course provides learners with multiple opportunities to track their learning progress with timely feedback.

	Found	Page	Consider Revising	Notes
--	-------	------	-------------------	-------

R1 Found 6-7,13 No
 R2
 R3
 R4

General Standard 4 – Instructional Materials Instructional materials enable learners to achieve stated learning objectives or competencies. The focus of this Standard is on supporting the course objectives and competencies, rather than on qualitative judgments about the instructional materials.

4.2 The relationship between the use of instructional materials in the course and completing learning activities is clearly explained.

	Found	Page	Consider Revising	Notes
--	-------	------	-------------------	-------

R1 Found 13 No
 R2
 R3
 R4

4.3 The course models the academic integrity expected of learners by providing both source references and permissions for use of instructional materials.

	Found	Page	Consider Revising	Notes
--	-------	------	-------------------	-------

R1 Found 3 No
 R2
 R3
 R4

4.4 The instructional materials represent up-to-date theory and practice in the discipline.

	Found	Page	Consider Revising	Notes
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R1 Found 3 No
 R2
 R3
 R4

4.5 A variety of instructional materials is used in the course.

	Found	Page	Consider Revising	Notes
--	-------	------	-------------------	-------

R1 Found 3 Yes Question is Appendix A in the textbook? Are there other materials that would be useful to the students?
 R2
 R3
 R4

General Standard 5 – Learning Activities and Learner Interaction Course activities facilitate and support learner interaction and engagement. Course components that promote active learning contribute to the learning process and to learner persistence.

5.3 The instructor’s plan for interacting with learners during the course is clearly stated.

	Found	Page	Consider Revising	Notes
R1	Found	8	No	
R2				
R3				
R4				

a. The university's official mode of communication is via university email.

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	We are looking for a statement that informs the student to use their OSU email for all course communications.
R2				
R3				
R4				

b. How do you expect students to address you, and how should they begin their emails?

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	How should students address you? Doctor, Last or First name?
R2				
R3				
R4				

c. Exam proctoring – provide students with clear statements on the use of a proctoring service and provide them a chance to practice taking an exam with that proctoring service.

	Found	Page	Consider Revising	Notes
R1	Found	5	No	
R2				
R3				
R4				

5.4 The requirements for learner interaction are clearly stated.

	Found	Page	Consider Revising	Notes
R1	Found	8	No	
R2				
R3				
R4				

a. Clearly state how long students can expect to wait until they receive an email response from you after they have contacted you via email.

	Found	Page	Consider Revising	Notes
R1	Found	8	No	
R2				
R3				
R4				

b. Remind students to avoid colors like red and green for accessibility reasons.

	Found	Page	Consider Revising	Notes
R1	Not Found		Yes	The syllabus template has wording for this if you want to include it.
R2				
R3				
R4				

General Standard 6 – Course Technology Course technologies support learners' achievement of course objectives or competencies. The technologies enabling the various course components facilitate rather than impede the learning process.

6.3 A variety of technology is used in the course.

	Found	Page	Consider Revising	Notes
R1	Found	4-6	No	

R2
R3
R4

General Standard 7 – Learner Support The course facilitates learner access to institutional support services essential to learner success. It is important to ensure online learners know they have access to and are encouraged to use the services that support learners at the institution. In the Learner Support Standard, four different kinds of support services are addressed: technical support, accessibility support, academic services support, and student services support.

7.1 The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.

	Found	Page	Consider Revising	Notes
R1	Found	5	No	

R2
R3
R4

7.2 Course instructions articulate or link to the institution’s accessibility policies and services.

	Found	Page	Consider Revising	Notes
R1	Found	11-12	No	

R2
R3
R4

7.3 Course instructions articulate or link to the institution’s academic support services and resources that can help learners succeed in the course.

	Found	Page	Consider Revising	Notes
R1	Found	11	No	

R2
R3
R4

7.4 Course instructions articulate or link to the institution’s student services and resources that can help learners succeed.

	Found	Page	Consider Revising	Notes
R1	Not Found		No	This relates to student health, campus life and other items. Consider adding this from the Syllabus template.

R2
R3
R4

General Standard 8 – Accessibility* and Usability The course design reflects a commitment to accessibility and usability for all learners. The course design reflects a commitment to accessibility, so that all learners can access all course content and activities, and to usability, so that all learners can easily navigate and interact with course components.

8.6 Vendor accessibility statements are provided for all technologies required in the course.

	Found	Page	Consider Revising	Notes
R1	Not Found		No	Consider adding the accessibility statements for the application used in the course from the Syllabus template.

R2
R3
R4