

Term Information

Effective Term Summer 2021
[Previous Value](#) Autumn 2019

Course Change Information

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

Adding a 100% DL option.

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

To give flexibility in how we offer some of our undergraduate major and minor courses.

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)?

None

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	Statistics
Fiscal Unit/Academic Org	Statistics - D0694
College/Academic Group	Arts and Sciences
Level/Career	Undergraduate
Course Number/Catalog	3410
Course Title	Principles of Data Collection and Analysis
Transcript Abbreviation	Prin Data Collect
Course Description	Principles of designing experiments; analysis of variance techniques for hypothesis testing; simultaneous confidence intervals; block designs; factorial experiments; random effects and mixed models; observational data.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	Yes
Is any section of the course offered	100% at a distance
Previous Value	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	Prereq: 3201 and 3202; or permission of instructor.
Exclusions	
Electronically Enforced	Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	27.0501
Subsidy Level	Baccalaureate Course
Intended Rank	Junior, Senior

Requirement/Elective Designation

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

Course Details

Course goals or learning objectives/outcomes	<ul style="list-style-type: none">• Grasp the basics of descriptive and inferential statistics for designed experiments.• Understand the differences between observational studies and designed experiments, and the limitations inherent in analyzing observational data.• Understand principles of good design, such as randomization, replication, and blocking.• Appreciate the importance of the assumptions that statistical models are based on.• Understand and use appropriate statistical notation and terminology.• Understand the fundamental components of ANOVA models (e.g., main effects and interactions).• Effectively implement statistical analyses for designed experiments in statistical software.• Summarize an analysis appropriately.
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Content Topic List	<ul style="list-style-type: none">• Basic principles of experimental design• Observational studies• Designs with one source of variation• Designs with two or more sources of variation• Sample size determination• Contrasts and simultaneous confidence intervals• Assessment of model assumptions• Factorial experiments• Block designs• Random and mixed effects models
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Sought Concurrence	No
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Attachments

- STAT 3410 - syllabus - DL.docx: DL Syllabus
(Syllabus. Owner: Craigmile,Peter F)
- STAT 3410 - syllabus - P.docx: In-person Syllabus
(Syllabus. Owner: Craigmile,Peter F)
- DL_checklist_Stat 3410.docx: ASC-Tech DL checklist
(Other Supporting Documentation. Owner: Craigmile,Peter F)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Craigmile,Peter F	11/17/2020 01:58 PM	Submitted for Approval
Approved	Craigmile,Peter F	11/18/2020 01:21 PM	Unit Approval
Approved	Haddad,Deborah Moore	11/18/2020 03:31 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Oldroyd,Shelby Quinn Vankeerbergen,Bernadette Chantal	11/18/2020 03:31 PM	ASCCAO Approval



THE OHIO STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES

SYLLABUS: STAT 3410 (DL) **PRINCIPLES OF DATA COLLECTION AND ANALYSIS** **AUTUMN 2021**

Course overview

Instructor

Instructor: Dr. O.A. Chkrebtii, Associate Professor in the Department of Statistics

Email address: Chkrebtii.1@osu.edu

Phone number: 614-292-0292

Office hours: Virtual Hours via Carmen Zoom (see Carmen page for Zoom link) will be held on:

- [office hour 1 day & time]
- [office hour 2 day & time]

Course

Online lectures: [lecture days and times] (recordings will be made available on Carmen, but attendance to the live lecture is recommended if possible)

Grader

[grader name and email]

MSLC office hours for the teaching assistants are:

- [office hours days & times]

Course description

This course covers principles of data collection and data analysis. The course introduces students to the primary ideas involved in designed vs. observational studies, and considers appropriate statistical methods for each. It also covers the basic principles of experimental design and the techniques used to analyze experiments that follow standard experimental designs. Specific designs to be covered include one-way ANOVA, two-and-higher-way ANOVA, factorial designs, block designs, and models with random effects. The JMP software will be used in the course to carry out all analyses and to provide experience to students in data analysis.

Course learning outcomes

By the end of this course, students should successfully be able to:

- Grasp the basics of descriptive and inferential statistics for designed experiments and observational studies
- Understand principles of good design, such as randomization, replication, and blocking
- Appreciate the importance of the assumptions that statistical models are based on
- Understand and use appropriate statistical notation and terminology
- Understand the fundamental components of ANOVA models (e.g., main effects and interactions)
- Effectively implement statistical analyses for designed experiments in the JMP software
- Summarize an analysis appropriately

Course materials

Required

Design and Analysis of Experiments, 9th edition, by Douglas C. Montgomery, Wiley, 2017 (print)

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://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

Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

Technology skills necessary for this specific course

- CarmenZoom
- Scanning and uploading a written document to Carmen

Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 10+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone
- Camera and/or scanner or tablet functionality: ability to scan, photograph, or write directly on a tablet and upload documents to Carmen

Necessary software

- We will be using the JMP statistical computing software, which is available free of charge to students (see <https://ocio.osu.edu/software/software-request-instructions>).
 - Technical support for JMP is available at https://www.jmp.com/en_us/support.html.
 - The privacy statement for JMP, developed by SAS Institute Inc., is available at https://www.sas.com/en_us/legal/privacy.html?_ga=2.256134857.358578425.1605637883-655840785.1605637883.
 - An accessibility conformance report for SAS is available at http://support.sas.com/accessibility/conformance/vpats/JMP_15_for_Windows.html; email inquiries: accessibility@sas.com.
- [Microsoft Office 365 ProPlus](#) All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Each student can install Office on five PCs or Macs, five tablets (Windows, iPad® and Android™) and five phones.
 - Students are able to access Word, Excel, PowerPoint, Outlook and other programs, depending on platform. Users will also receive 1 TB of OneDrive for Business storage.
 - Office 365 is installed within your BuckeyeMail account. Full instructions for downloading and installation can be found <https://ocio.osu.edu/kb04733>.

Course delivery

The instructor will deliver live CarmenZoom lectures during the scheduled class time. Lectures will be recorded and posted on the class website soon after. In addition to the lecture videos, assignments will be posted on the class website approximately once every two weeks. You will be given ample time to complete the assignments. Weekly quizzes will be posted to review each week's material. These quizzes will be graded for completeness for the participation component of the grade.

The instructor will hold weekly office hours via CarmenZoom. The dates and times will be announced and posted on the Carmen website. The instructor will also initiate and manage active discussion boards, also via Carmen.

Synchronous attendance of lectures is encouraged but not required, as they will be recorded; however, midterm and final exams must be written synchronously.

Grading and faculty response

Grades

Assignment or category	Percentage
Homework	30
Participation	10
Exam 1	15
Exam 2	15
Exam 3	15
Final Exam	15
Total	100

Assignment information

Homework will be assigned approximately every two weeks. It will consist of mostly textbook-style problems, problems motivated by real-world applications, and analyses requiring the use of statistical software. You may work together on assignment problems, but each student must hand in his or her own work, written in his or her own words. Do not copy any part of another student's homework including computer code or output. Use of homework solutions distributed

in previous offerings of the course or available on the web constitutes academic misconduct and will be handled according to university rules. Sharing or disseminating solutions, or in any way knowingly enabling others to commit academic misconduct also constitutes academic misconduct, and will be reported. Homework must be uploaded to Carmen at the beginning of class on the due date. The solutions may be handwritten and scanned, entered directly into a tablet, or typed. Any software output must be appended to the homework file prior to submission. **All work and software output must be uploaded as a single pdf file.** Please be sure that the questions are clearly labeled, all supporting work (including software output) can be easily identified, and that all figures/tables are referenced and interpreted in the text.

Late assignments

Assignment solutions will be posted shortly after submission. No late assignments will be accepted without prior permission or formal documentation. The lowest homework grade will be dropped for each student. Accommodations can be made in case of severe illness, so please notify me as soon as possible if this situation arises.

Grading scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E

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 large biweekly assignments, you can generally expect feedback within **7 days**.

E-mail

I prefer to communicate via email (chkrebtii.1@osu.edu) rather than using the Carmen email tool. **Please write “STAT 3410” somewhere in the subject line**, as this will help me to quickly identify and reply to class emails. Due to the large volume of emails, I will reply to e-mails within **48 hours on school days**.

Discussion board

I will check and reply to messages in the discussion boards every **24 hours on school days**.

Attendance, participation, and discussions

Student participation requirements

Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

- **Logging in: AT LEAST ONCE PER WEEK**
Be sure you are logging in to the course in Carmen each week, including weeks with holidays or weeks with minimal online course activity. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- **Office hours and live sessions: OPTIONAL OR FLEXIBLE**
All live, scheduled events for the course, including my office hours, are optional. For live presentations, I will provide a recording that you can watch later. If you are required to discuss an assignment with me, please contact me at the beginning of the week if you need a time outside my scheduled office hours.
- **Completing Weekly Quizzes: APPROXIMATELY ONCE PER WEEK**
As participation, each week you can expect to complete an online Carmen quiz on the week's topics.

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. Informality (including an occasional emoticon) is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Other course policies

Health and safety

The Ohio State University Wexner Medical Center's Coronavirus Outbreak site (<https://wexnermedical.osu.edu/features/coronavirus>) includes the latest information about COVID-19 as well as guidance for students, faculty and staff.

Student academic services

Student academic services offered on the OSU main campus
<http://advising.osu.edu/welcome.shtml>.

Student support services

Student support services offered on the OSU main campus <http://ssc.osu.edu>.

Academic integrity policy

Policies for this online course

- **Exams:** You must complete the midterm and final exams yourself, without any external help or communication. Weekly quizzes are included as self-checks without points attached.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- **Falsifying research or results:** All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review:** The course includes many opportunities for formal collaboration with your classmates. While study groups are allowed, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

Ohio State's academic integrity policy

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

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.

Statement on title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Accessibility accommodations for students with disabilities

The University strives to make all learning experiences as accessible as possible. 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 online 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
- Synchronous course tools

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's Counseling and Consultation Service (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 Suicide Prevention Hotline at 1-800-273- TALK or at suicidepreventionlifeline.org

Disclaimer

This syllabus should be taken as a fairly reliable guide for the course content. However, you cannot claim any rights from it and in particular we reserve the right to change due dates or the methods of grading and/or assessment if necessary. Any changes will be communicated to you through official course announcements.

Course schedule (tentative)

Week	Topics, Readings, Assignments, Deadlines
1 (Week of Aug 23)	Orientation, course introduction; review of basic principles of statistical inference
2 (Week of Aug 30)	Review of basic principles of statistical inference; introduction to JMP
3 (Week of Sep 6)	Designed experiments vs observational studies; Principles of experimental design
4 (Week of Sep 13)	Principles of experimental design; Designs with one source of variation
5 (Week of Sep 20)	Checking model assumptions
6 (Week of Sep 27)	Designs with one source of variation, sample size determination
7 (Week of Oct 4)	Designs with one source of variation, sample size determination; Inferences about contrasts and treatment means
8 (Week of Oct 11)	Inferences about contrasts and treatment means
9 (Week of Oct 18)	Experiments with multiple crossed treatment factors
10 (Week of Oct 25)	Experiments with multiple crossed treatment factors
11 (Week of Nov 1)	Experiments with multiple crossed treatment factors; Fitting multi-factor models in JMP
12 (Week of Nov 8)	Block designs
13 (Week of Nov 15)	Block designs
14 (Week of Nov 22)	Additional topics
15 (Week of Nov 29)	Additional topics



THE OHIO STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES

SYLLABUS: STAT 3410 (P)

PRINCIPLES OF DATA COLLECTION AND ANALYSIS

AUTUMN 2021

Course overview

Instructor

Instructor: Dr. O.A. Chkrebtii, Associate Professor in the Department of Statistics

Email address: Chkrebtii.1@osu.edu

Phone number: 614-292-0292

Office hours: In-person office hours will be held on:

- [office hour 1 day & time]
- [office hour 2 day & time]

Course

In-person lectures: [lecture days and times]

Grader

[grader name and email]

MSLC office hours for the teaching assistants are:

- [office hours days & times]

Course description

This course covers principles of data collection and data analysis. The course introduces students to the primary ideas involved in designed vs. observational studies, and considers appropriate statistical methods for each. It also covers the basic principles of experimental design and the techniques used to analyze experiments that follow standard experimental designs. Specific designs to be covered include one-way ANOVA, two-and-higher-way ANOVA, factorial designs, block designs, and models with random effects. The JMP software will be used in the course to carry out all analyses and to provide experience to students in data analysis.

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Necessary equipment

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Necessary software

- We will be using the JMP statistical computing software, which is available free of charge to students (see <https://ocio.osu.edu/software/software-request-instructions>).
 - Technical support for JMP is available at https://www.jmp.com/en_us/support.html.
 - The privacy statement for JMP, developed by SAS Institute Inc., is available at https://www.sas.com/en_us/legal/privacy.html?_ga=2.256134857.358578425.1605637883-655840785.1605637883.
 - An accessibility conformance report for SAS is available at http://support.sas.com/accessibility/conformance/vpats/JMP_15_for_Windows.html; email inquiries: accessibility@sas.com.
- [Microsoft Office 365 ProPlus](#) All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Each student can install Office on five PCs or Macs, five tablets (Windows, iPad® and Android™) and five phones.
 - Students are able to access Word, Excel, PowerPoint, Outlook and other programs, depending on platform. Users will also receive 1 TB of OneDrive for Business storage.
 - Office 365 is installed within your BuckeyeMail account. Full instructions for downloading and installation can be found <https://ocio.osu.edu/kb04733>.

Course delivery

The instructor will deliver in-person lectures during the scheduled class time. Attendance and participation will be noted. In addition to the lectures, assignments will be posted on the class website approximately once every two weeks. You will be given ample time to complete the assignments.

The instructor will hold weekly in-person office hours. The dates and times will be announced and posted on the Carmen website.

Grading and faculty response

Grades

Assignment or category	Percentage
Homework	30
Participation	5
Exam 1	20
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Assignment information

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Grading scale

93–100: A
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83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E

Faculty feedback and response time

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- **Live sessions: REQUIRED**
All live, scheduled events for the course are required. Several missed lectures are allowed, but long absences without justification will result in lost participation points.
- **Office hours: OPTIONAL**
Office hours are optional.

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

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<http://advising.osu.edu/welcome.shtml>.

Student support services

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Academic integrity policy

Policies for this online course

- **Exams:** You must complete the midterm and final exams yourself, without any external help or communication. Weekly quizzes are included as self-checks without points attached.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- **Falsifying research or results:** All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review:** The course includes many opportunities for formal collaboration with your classmates. While study groups are allowed, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

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Statement on title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Accessibility accommodations for students with disabilities

The University strives to make all learning experiences as accessible as possible. 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 online 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
- Synchronous course tools

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's Counseling and Consultation Service (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 Suicide Prevention Hotline at 1-800-273- TALK or at suicidepreventionlifeline.org

Disclaimer

This syllabus should be taken as a fairly reliable guide for the course content. However, you cannot claim any rights from it and in particular we reserve the right to change due dates or the methods of grading and/or assessment if necessary. Any changes will be communicated to you through official course announcements.

Course schedule (tentative)

Week	Topics, Readings, Assignments, Deadlines
1 (Week of Aug 23)	Orientation, course introduction; review of basic principles of statistical inference
2 (Week of Aug 30)	Review of basic principles of statistical inference; introduction to JMP
3 (Week of Sep 6)	Designed experiments vs observational studies; Principles of experimental design
4 (Week of Sep 13)	Principles of experimental design; Designs with one source of variation
5 (Week of Sep 20)	Checking model assumptions
6 (Week of Sep 27)	Designs with one source of variation, sample size determination
7 (Week of Oct 4)	Designs with one source of variation, sample size determination; Inferences about contrasts and treatment means
8 (Week of Oct 11)	Inferences about contrasts and treatment means
9 (Week of Oct 18)	Experiments with multiple crossed treatment factors
10 (Week of Oct 25)	Experiments with multiple crossed treatment factors
11 (Week of Nov 1)	Experiments with multiple crossed treatment factors; Fitting multi-factor models in JMP
12 (Week of Nov 8)	Block designs
13 (Week of Nov 15)	Block designs
14 (Week of Nov 22)	Additional topics
15 (Week of Nov 29)	Additional topics

Arts and Sciences Distance Learning Course Component Technical Review Checklist

Course: STAT 3410

Instructor: Dr. O.A. Chkrebti

Summary: Principles of Data Collection and Analysis

Standard - Course Technology	Yes	Yes with Revisions	No	Feedback/ Recomm.
6.1 The tools used in the course support the learning objectives and competencies.	X			<ul style="list-style-type: none"> • Carmen • Office 365 • JMP software
6.2 Course tools promote learner engagement and active learning.	X			<ul style="list-style-type: none"> • Zoom lectures • Carmen Discussion boards
6.3 Technologies required in the course are readily obtainable.	X			All are available within Carmen which is free to use.
6.4 The course technologies are current.	X			All items are updated regularly.
6.5 Links are provided to privacy policies for all external tools required in the course.	X			Privacy policy for JMP software is included.
Standard - Learner Support				
7.1 The course instructions articulate or link to a clear description of the technical support offered and how to access it.	X			Links to 8HELP are provided, as is a link to JMP software support.
7.2 Course instructions articulate or link to the institution's accessibility policies and services.	X			a
7.3 Course instructions articulate or link to an explanation of how the institution's academic support services and resources can help learners succeed in the course and how learners can obtain them.	X			b
7.4 Course instructions articulate or link to an explanation of how the institution's student services and resources can help learners succeed and how learners can obtain them.	X			c
Standard – Accessibility and Usability				
8.1 Course navigation facilitates ease of use.	X			Recommend using the Carmen Distance Learning "Master Course" template developed by ODEE and available in the Canvas Commons to provide student-users with a consistent user experience in terms of navigation and access to course content.
8.2 Information is provided about the accessibility of all technologies required in the course.	X			accessibility policy for JMP software is included.
8.3 The course provides alternative means of access to course materials in formats that meet the needs of diverse learners.	X			
8.4 The course design facilitates readability	X			
8.5 Course multimedia facilitate ease of use.	X			All assignments and activities that use the Carmen LMS with embedded multimedia facilitates ease of use. All other multimedia resources facilitate ease of use by being available through a standard web browser

Reviewer Information

- Date reviewed: 11/17/20
- Reviewed by: Ian Anderson

Notes: Add dates to the weekly breakdown.

^aThe following statement about disability services (recommended 16 point font):
Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office of Student Life Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 614- 292-3307, slds@osu.edu; slds.osu.edu.

^bAdd to the syllabus this link with an overview and contact information for the student academic services offered on the OSU main campus.
<http://advising.osu.edu/welcome.shtml>

^cAdd to the syllabus this link with an overview and contact information for student services offered on the OSU main campus. <http://ssc.osu.edu>. Also, consider including this link in the “Other Course Policies” section of the syllabus.