

Term Information

Effective Term Autumn 2020

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 3450.02
Course Title Basic Statistics for Engineers
Transcript Abbreviation Bas Stat Eng
Course Description Introduction to probability; Normal distribution; Confidence intervals for means; Hypothesis tests for means; Multi-factor experiments; Experiments with blocking. Offered online.
Semester Credit Hours/Units Fixed: 2

Offering Information

Length Of Course 14 Week, 12 Week, 8 Week, 7 Week, 6 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
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: Math 1152, 1161.xx, 1172, or 1181, or equiv, or permission of instructor.
Exclusions Not open to students with credit for 3450, 3450.01, 3460, 3470, 3470.01, or 3470.02.
Electronically Enforced Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

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

Requirement/Elective Designation

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

- Understand basic concepts of statistics and probability.
- Comprehend methods needed to analyze and critically evaluate statistical arguments.
- Recognize the importance of statistical ideas.

Content Topic List

- Introduction to Probability
- Normal distribution
- Confidence intervals for means
- Hypothesis tests for means
- Multi-factor experiments
- Experiments with blocking
- Fractional factorial experiments

Sought Concurrence

No

Attachments

- Stat 3450.02 Syllabus.docx
(Syllabus. Owner: Craigmile, Peter F)
- Stat 3450.02_outcomes_assessment.doc
(GEC Course Assessment Plan. Owner: Craigmile, Peter F)
- DL review 3450.02.docx: DL review
(Other Supporting Documentation. Owner: Craigmile, Peter F)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Craigmile, Peter F	06/05/2020 02:55 PM	Submitted for Approval
Approved	Craigmile, Peter F	06/05/2020 03:08 PM	Unit Approval
Approved	Haddad, Deborah Moore	06/05/2020 04:03 PM	College Approval
Pending Approval	Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Oldroyd, Shelby Quinn Vankeerbergen, Bernadette Chantal	06/05/2020 04:03 PM	ASCCAO Approval



SYLLABUS:

STAT 3450.02 – BASIC STATISTICS FOR ENGINEERS

Course overview

Instructor

To be determined

Office hours: Days and times TBD, or by appointment. Office hours will be held on CarmenZoom (<https://osu.zoom.us>)

Course description

This 2 credit hour course provides an introduction to probability and statistics targeted toward students studying mechanical engineering. Topics covered include probability, random variables, the normal and binomial distributions, confidence intervals for means, hypothesis tests for means, multi-factor experiments and experiments with blocking. A more detailed list of topics can be found in the tentative schedule below.

Prerequisites

Calculus, integration, exponential function, finite and infinite sums, union and intersection of sets. Prerequisite courses are MATH 1152, 1161.xx, 1172, or 1181.

Course learning outcomes

General Education (GE) Requirement: This course satisfies the GE requirement in Data Analysis.

Expected Learning Outcomes: Upon successful completion of this course, students understand basic concepts of statistics and probability, comprehend methods needed to analyze and critically evaluate statistical arguments, and recognize the importance of statistical ideas.

Required Course Materials

Principles of Statistics for Engineers and Scientists (2nd edition) by William Navidi. The electronic version of this textbook are offered through CarmenBooks.

<https://affordablelearning.osu.edu/carmenbooks/students>

Online Course Delivery and Course Website

100% of this course can be completed by distance learning. Instructions, materials (including embedded lecture videos), assignments, announcements and other information will be posted to the course CarmenCanvas site. Students are expected to watch lecture videos, read textbook sections and study other materials as assigned each week. Students are also required to respond to 'check-in' questions; aggregate responses may be shared with the entire class. Students are encouraged to use the CarmenCanvas discussion boards to ask questions or otherwise discuss topics relevant to this course. Students should attend virtual office hours via CarmenZoom as needed or desired. Students should also complete or submit materials for assessment via CarmenCanvas, as detailed below.

Students are expected to check the CarmenCanvas course site regularly, and are encouraged to customize CarmanCanvas notifications to stay abreast of course announcements and activities (<https://resourcecenter.odee.osu.edu/carmencanvas/setting-notification-preferences>).

Assessment

Participation: Students should regularly answer all 'check-in' questions that are posted along with the video and reading assignments in CarmenCanvas and are typically due within 4-5 days of the relevant video and reading assignment. There will be approximately four such questions each week. Each question counts equally toward the final course grade, and are marked only for completion.

Homework: Graded homework problems will be due weekly, with some exceptions related to exams and university holidays. Students must submit solutions to these assignments online via CarmenCanvas. Solutions to long-form answers should be clearly legible and uploaded via a .pdf file created by the student. Please contact the instructor as soon as possible if you need assistance in creating .pdf files. Students will typically have 5-7 days between the assignment of relevant course activities and graded homework due dates. Students are encouraged to work together to understand course concepts, but students must only submit their own work to CarmenCanvas.

Exams: There will be two midterm exams and one final exam. Each exam has two components. The first consists of questions to be answered via multiple choice and/or short-answer within the CarmenCanvas quiz system. Students may begin the quiz any time during the announced 4-hour window, but must submit their responses within 30 minutes of beginning the quiz. The

second component consists of questions to be answered via longer responses, including calculations. Students may begin the long answer component any time during the announced 24-hour window, but must upload clearly legible written answers within 90 minutes of beginning the long answer portion. Answers should be submitted via a .pdf file created by the student. Students may refer to their textbook, notes, and course CarmenCanvas site while working on both exam components. However, during an exam embargo period consisting of the 4- and 24-hour windows and any additional time announced by the instructor, students may not work with other people or use outside resources (including third party websites or tutoring services) to create new notes for use during the exam or communicate with any person other than the course instructor about any aspect of the exam. This embargo includes providing or seeking any information about the exam, including perceived exam difficulty and exam format, such as number of questions. Please contact the instructor as soon as possible if you believe the embargo may have been breached. See the course policy on academic integrity for more details.

Participation will count for 5% of the final grade, homework will count for 15%, each midterm exam will count for 25% and the final exam will count for 30% of the final grade.

Course schedule

The following is a tentative weekly list of topics that will be covered during this course.

Dates will be added when the course is offered. Textbook readings are currently from the first edition, and will be updated for the new 2nd edition before the course is offered:

Week	Topic	Textbook Reading
1	Sampling, numerical and graphical summaries; Probability rules, equally likely outcomes	1.1-1.3, 3.1
2	Conditional probability, independence, discrete random variables, probability mass functions	3.2-3.3
3	Expected values, variances, continuous random variables, density and distribution functions	3.3
4	Expected values and variances of continuous random variables, random samples, sample means, propagation of error	3.3-3.4
5	Binomial and normal distributions	4.1, 4.3
6	Linear combinations of normal random variables, normal probability plots, central limit theorem	4.3, 4.7, 4.8
7	Confidence intervals for a mean (known variance), sample size calculation	5.1, 5.2
8	Confidence intervals for a mean (unknown variance)	5.4
9	Hypothesis tests for population means	6.1
10	Significance levels, t-tests, p-values	6.2, 6.4, 6.6
11	Power, two-sample t-tests	6.7, 7.1, 7.3
12	Experiments, randomization, F-tests, ANOVA	9.1
13	Two factor experiments, balanced vs. unbalanced experiments, blocking	9.3, 9.4
14	2 ^p factorial experiments, Fractional factorial designs	9.5, notes

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>, 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; the following website may help you if you encounter difficulties with Carmen: <https://resourcecenter.odee.osu.edu/canvas/>.

Necessary equipment

- Computer: current Mac (macOS) or PC (Windows 10+) with high-speed internet connection and an up-to-date browser. A number of publicly available computers are available on campus, here is a link for their locations <https://odee.osu.edu/public-computing>.
- CarmenZoom text, audio, and video chat. If you need technical assistance, either call 614-688-HELP, or refer to the online instructions: <https://resourcecenter.odee.osu.edu/carmenzoom>

Staff response

Staff feedback and response time

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

Canvas Conversations

The course instructor or teaching assistant will reply to messages sent via CarmenCanvas Conversations or email within **48 hours on school days (Monday – Friday, excluding university holidays; list of holidays at <http://registrar.osu.edu/staff/bigcal.asp>)**.

Discussion board

The course instructor or teaching assistant will check and reply to messages in the discussion boards as appropriate every **48 hours on school days**.

Email

The course instructor will check and reply to email within **48 hours on school days**. Due to privacy law, the course instructor and teaching assistants will only respond to email sent from **official Ohio State University addresses**, such as your name.#@buckeyemail.osu.edu address.

Attendance, participation, and discussions

Communication guidelines

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

- **Writing style:** While there is no need to communicate 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.
- **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

Academic integrity policy

Policies for this online course

- **Assessments:** You must complete the assessments yourself, without any external help or communication. More details are included in the assessment section of this syllabus.
- **Participation:** You must create submissions to TopHat questions/polls and CarmenCanvas discussion boards yourself. You must not engage in disruptive conduct.

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.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact the instructor.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages (<http://oaa.osu.edu/coam.html>)
- *Ten Suggestions for Preserving Academic Integrity* (<https://oaa.osu.edu/coamtensuggestions.html>)
- *Eight Cardinal Rules of Academic Integrity* (<http://www.northwestern.edu/uacc/8cards.htm>)

Advising

For help navigating this large university, you will find that you need advising. In addition, advisors can help you get information regarding accessing course materials to meet the needs of diverse learners. For more information, visit the university's advising website at <https://advising.osu.edu/>. In addition to advising services, OSU main campus students may find assistance at <http://ssc.osu.edu>.

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

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.

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 (<https://community.canvaslms.com/docs/DOC-2061>)
- Streaming audio and video



SYLLABUS:

STAT 3450.01 – BASIC STATISTICS FOR ENGINEERS

Course overview

Instructor

To be determined

Office hours: Days and times TBD, or by appointment.

Course description

This 2 credit hour course provides an introduction to probability and statistics targeted toward students studying mechanical engineering. Topics covered include probability, random variables, the normal and binomial distributions, confidence intervals for means, hypothesis tests for means, multi-factor experiments and experiments with blocking. A more detailed list of topics can be found in the tentative schedule below.

Prerequisites

Calculus, integration, exponential function, finite and infinite sums, union and intersection of sets. Prerequisite courses are MATH 1152, 1161.xx, 1172, or 1181.

Course learning outcomes

General Education (GE) Requirement: This course satisfies the GE requirement in Data Analysis.

Expected Learning Outcomes: Upon successful completion of this course, students understand basic concepts of statistics and probability, comprehend methods needed to analyze and critically evaluate statistical arguments, and recognize the importance of statistical ideas.

Required Course Materials

Principles of Statistics for Engineers and Scientists (2nd edition) by William Navidi. The electronic version of this textbook are offered through CarmenBooks.

<https://affordablelearning.osu.edu/carmenbooks/students>

Students are required to register with **TopHat**, which is free for Ohio State University students. Please go to the TopHat home page (<https://tophat.com/>) and either login (<https://app.tophat.com/login>) or signup for an account (<https://app.tophat.com/register/>), which is free for students at The Ohio State University. TopHat is already connected to the CarmenCanvas course page, so you should not need a join code. Please contact the instructor if you have difficulty accessing the course TopHat content.

Course Website

Instructions, materials, assignments, announcements and other information will be posted to the course CarmenCanvas site. Students are encouraged to use the CarmenCanvas discussion boards to ask questions or otherwise discuss topics relevant to this course.

Students are expected to check the CarmenCanvas course site regularly, and are encouraged to customize CarmanCanvas notifications to stay abreast of course announcements and activities (<https://resourcecenter.odee.osu.edu/carmencanvas/setting-notification-preferences>).

Learning Center Tutoring

Statistics department assistants hold office hours in the Mathematics and Statistics Learning Center in Cockins Hall 122. The hours during which tutors for this course will be available will be posted on the course CarmenCanvas site.

Assessment

Participation: TopHat questions/polls will be administered during lecture. To account for technical difficulties and reasonable absences, full participation credit will be awarded to students who complete at least 80% of TopHat questions over the course of the semester. Less than 80% of answered questions will be pro-rated.

Homework: Graded homework problems will be due weekly, with some exceptions related to exams and university holidays. Students must submit solutions to these assignments online via CarmenCanvas. Solutions to long-form answers should be clearly legible and uploaded via a .pdf file created by the student. Please contact the instructor as soon as possible if you need assistance in creating .pdf files. Students will typically have 5-7 days between the assignment of relevant course activities and graded homework due dates. Students are encouraged to work

together to understand course concepts, but students must only submit their own work to CarmenCanvas.

Exams: There will be two midterm exams and one final exam. **All exams will be in-person** at a location and time to be determined and announced on CarmenConnect. The first midterm exam will take place roughly after 5 weeks of classes and the second midterm exam will take place roughly 5 weeks after the first midterm. The final exam will take place at the time and date established by the University. Students may bring one piece of 8.5x11 paper and a calculator to the exam. Use of a cell phone or similar communication device for any purpose during the exam is prohibited. Students may only communicate with the instructor or exam proctor during the exam period.

Participation will count for 5% of the final grade, homework will count for 15%, each midterm exam will count for 25% and the final exam will count for 30% of the final grade.

Course schedule

The following is a tentative weekly list of topics that will be covered during this course.

Dates will be added when the course is offered. Textbook readings are currently from the first edition, and will be updated for the new 2nd edition before the course is offered:

Week	Topic	Textbook Reading
1	Sampling, numerical and graphical summaries; Probability rules, equally likely outcomes	1.1-1.3, 3.1
2	Conditional probability, independence, discrete random variables, probability mass functions	3.2-3.3
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6	Linear combinations of normal random variables, normal probability plots, central limit theorem	4.3, 4.7, 4.8
7	Confidence intervals for a mean (known variance), sample size calculation	5.1, 5.2
8	Confidence intervals for a mean (unknown variance)	5.4
9	Hypothesis tests for population means	6.1
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Course technology

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Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen; the following website may help you if you encounter difficulties with Carmen: <https://resourcecenter.odee.osu.edu/canvas/> .
- Navigating TopHat: the following website may help you if you encounter difficulties with TopHat: <https://resourcecenter.odee.osu.edu/top-hat/using-top-hat-students>.

Necessary equipment

- Computer: current Mac (macOS) or PC (Windows 10+) with high-speed internet connection and an up-to-date browser. A number of publicly available computers are available on campus, here is a link for their locations <https://odee.osu.edu/public-computing> .

Staff response

Staff feedback and response time

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Other course policies

Academic integrity policy

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Accessibility accommodations for students with disabilities

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.

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 (<https://community.canvaslms.com/docs/DOC-2061>)
- TopHat

Learning outcomes and assessment plan for Statistics 3450.02: Basic Statistics for Engineers

Expected Learning Outcomes Data Analysis: Students develop skills in drawing conclusions and critically evaluating results based on data.

Expected Learning Outcomes:

1. Students understand basic concepts of statistics and probability.
2. Students comprehend methods needed to analyze and critically evaluate statistical arguments.
3. Students recognize the importance of statistical ideas.

1. How do the course objectives address the GE category expected learning outcomes?

Students in Statistics 3450 are expected to be able to identify an appropriate analysis for data collected in a study, carry out such an analysis, examine whether the assumptions behind the analysis are reasonable, and recognize the strengths or weaknesses of the study based on how the data were collected. Doing so requires understanding basic concepts in statistics and probability; the ability to create numerical and critique graphical summaries of data; understanding how the design of a study affects the conclusions that can be made; and the ability to carry out basic statistical analyses.

2. How do the readings assigned address the GE category expected learning outcomes?

Readings are from the textbook and cover all the topics listed in the course. See the discussion in the next item regarding how these topics will address the GE category expected learning outcomes.

3. How do the topics address the GE category expected learning outcomes?

Course topics include probability (thus introducing students to basic concepts in probability); sampling distributions and statistical inference (thus introducing students to basic concepts in statistics); graphical and numerical summaries of data, design of experiments and sampling designs, and statistical inference (thus helping students critically evaluate statistical arguments); and one-sample procedures, two-sample procedures, and ANOVA (thus providing students with tools to analyze data).

4. How do the written assignments address the GE category expected learning outcomes?

The written assignments will include problems (from the textbook) on material from all the course topics. The problems will serve to provide practice in creating numerical displays; evaluating the quality of graphical displays, designing simple studies and

assessing the quality of a design used in a study (both experimental and sampling designs); understanding the rules of probability including calculating probabilities in simple settings; understanding the notion of sampling distributions and calculating simple probabilities for sample means based on the sampling distributions; analyzing data in a variety of settings as well as checking the assumptions behind the analyses.

Course assessment plan:

1. Students will conduct analyses of data throughout the course on both homework assignments and exams. Students will be required to discuss and interpret the results and the limitations of their analysis in both cases (using “plain English”). This will require mastery of the expected learning outcomes and will provide an assessment of the extent to which the class appears to have mastered the expected learning outcomes.
2. Final exams will contain embedded questions that address the learning outcomes. Using the same, or very similar, questions each time the course is taught will provide a consistent evaluation over time. Embedded questions will not appear in copies of past final exams and their solutions that are posted for student use. The embedded questions will either come from or be modeled on the Assessment Resource Tools for Improving Statistical Thinking (ARTIST) available online at www.causeweb.org/research/. These are validated test questions and measurement tools to use in assessing statistical thinking.
3. A departmental committee will review the syllabus and direct assessment results regularly to make sure that it continues to address learning outcomes for the data analysis component of the GE.

GE Expected Learning Outcomes	Methods of Assessment *Direct methods are required. Additional indirect methods are encouraged.	Level of student achievement expected for the GE ELO. (for example, define percentage of students achieving a specified level on a scoring rubric)	What is the process that will be used to review the data and potentially change the course to improve student learning of GE ELOs?
ELO 1 Students understand basic concepts of statistics and probability.	Embedded exam questions	Our goal is for 80% of the students in the course to answer items correctly; we consider this to be above average performance and to demonstrate successful achievement of the ELO.	A departmental committee will review the syllabus and direct assessment results regularly to make sure that it continues to address learning outcomes for the data analysis component of the GE.
ELO 2 Students comprehend methods needed to analyze and critically evaluate statistical arguments.	Embedded exam questions	Our goal is for 80% of the students in the course to answer items correctly; we consider this to be above average performance and to demonstrate successful achievement of the ELO.	
ELO 3 Students recognize the importance of statistical ideas.	Embedded exam questions	Our goal is for 80% of the students in the course to answer items correctly; we consider this to be above average performance and to demonstrate successful achievement of the ELO.	

Arts and Sciences Distance Learning Course Component Technical Review Checklist

Course: Stats 3450.02

Instructor: TBD

Summary: Basic Statistics For Engineers

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"> Office 365 Carmen TopHat Proctorio
6.2 Course tools promote learner engagement and active learning.	X			<ul style="list-style-type: none"> Carmen Message Boards TopHat Carmen Quizzes
6.3 Technologies required in the course are readily obtainable.	X			All are available for free via OSU site license
6.4 The course technologies are current.	X			All apps are updated regularly.
6.5 Links are provided to privacy policies for all external tools required in the course.	X			No external tools are used
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
7.2 Course instructions articulate or link to the institution's accessibility policies and services.	X			Please included statement 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			Please include statement 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			Please included statement 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			
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.				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: 6/5/20
- Reviewed by: Ian Anderson

Notes: Please assign dates to the weekly breakdown. Please note that method of delivery is 100% online.

^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.