

**Linn-Benton Community College**  
**Department of Business Management**  
**Business Quantitative Methods - Online**  
**BA275(CRN:34228) Winter 2022**

<p><b><u>Class Information:</u></b> <u>Name/Number:</u> BA275 (CRN:34228) <u>Format:</u> 100% online <b><u>Instructor Information:</u></b> <u>Name:</u> Shengnan Fang <u>Email:</u> fangs@linnbenton.edu</p>	<p><b><u>Contact Methods:</u></b> Please contact me directly through Email. From there, I can answer your questions and provide more information, set up a Zoom talk, or do anything else necessary to assist.</p>
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**Week 1 Zoom meeting at 11:30 am on Thursday (Jan 6<sup>th</sup>) is strongly recommended!!**

**My Zoom link is <https://linnbenton.zoom.us/j/2072563553>**

### **This Online Class**

My absolute goal throughout this course, and all online courses I teach, is to give you the same learning experience you would receive on campus, just in a slightly more flexible format.

You may have heard business quantitative is hard. **And this is a pretty intensive class with more assignments than your other subjects.** To be honest, without practice it would be hard to learn business analysis. It's not easy, and this is not a "blow off" class. But one thing I can promise you is this:

**I'll work every bit as hard as you do in this class. I'll match your effort point for point.**

If you're looking for a class you can visit for a few minutes each week, read chapters at the last second, and still pull an A, this probably isn't it. But if you're looking to learn quite a bit about a subject that affects absolutely everyone, no matter their major, job, etc., I think your hard work will pay off and you'll leave the class knowing way more than you did coming in.

### **Course Prerequisites**

This course starts with fundamental statistical concepts and statistical inference tools, and then moves on to an in-depth discussion on advanced quantitative methods most relevant to business students. Topics include descriptive statistics, random variables, probability distributions, sampling and sampling distributions, simple and more advanced quantitative analysis techniques for both categorical and numerical data, simple regression analysis, design of experiments, analysis of variance, simulations, decision analysis, survey data analysis and linear regression.

### **Course Outcomes**

Upon successful completion of the course, students should be able to:

- identify the use and misuse of statistics in our daily lives,

- explain how data are gathered and summarized,
- examine business problems from a quantitative perspective,
- employ appropriate statistical tools for making inferences about a population based on sample information,
- apply appropriate quantitative techniques to perform computer-assisted analysis,
- interpret analysis results and communicate results to a non-statistical audience.

### A Word on Math and Graphs

If you are comfortable with addition, subtraction, multiplication, division, and solving for an unknown variable (“solve for X”), you have plenty of math background for this course. (If you’re not, I can help you with the math side of things if and when they give you difficulty.

You won’t be learning any higher-level math like advanced algebra or calculus in the course because it’s simply not necessary. It’s my hope, however, that the class will help you build a bridge between understanding *how* to use these mathematical processes and figuring out *why* and *when* to use them. Graphs are also an essential part of economics, but even if you are an absolute graph beginner the text and I will walk you through using them until you feel comfortable.

Some of you will find this course pretty straightforward, and others will find it a challenge. I’m here to help no matter which category you fit in, or if you’re somewhere in between.

### Getting Information

#### Course Announcements

Check course announcements at least twice a week (I recommend Mondays and Wednesdays – see below, “Getting on a Schedule”).

Because I teach four online classes and many students, emails asking about things that have been addressed via Moodle announcements will receive the lowest priority. ***Please, please check the announcements and syllabus before asking about due dates, grade postings, etc.***

I can only assume you read the course announcements, just like I can only assume you read the course syllabus, and so I must operate with the assumption that you do. Not reading the syllabus or course announcements is not an excuse for, well, anything – please check in and keep up, and ask questions if anything is unclear!

#### WebAssign

WebAssign will be very important in this online class, especially since we don’t have face-to-face meetings. Therefore, consider it absolutely mandatory. You need to do the homework assignments, quizzes and exams on WebAssign, and also watch the videos with walk-through problems. Those videos are greatly helpful for you to finish the follow-up quizzes.

#### Getting on a Schedule

Online classes are convenient in many ways, but one problem that sometimes arises is that it’s harder to remember deadlines when you’re not coming to a physical classroom every day or so. I’ve found the best way to handle this is to give all due dates from the very first day of class (you can find them on the last page of the syllabus) and to have a strict schedule. **In our class,**

**every week will have the same pattern:**

On **Mondays**, at noon, I'll post our weekly announcement that basically summarizes what will happen that week in the class. I'll also put up the week's lectures, handouts, articles, and/or practice problems at the same time.

A couple of notes on accessing course materials, especially lectures:

**When you access the PowerPoint lectures, make sure to download them and open them from your computer. This will allow you to watch the lecture essentially like a video. If you "stream" the file by opening it through Moodle, there is a good chance there could be stuttering or delays, and you'll have to manually click through the audio on the slides.**

Treat the PowerPoint lectures just like in-class lectures. Take notes, and mark questions to ask me right away.

On **Tuesdays**, it is a good time for you to check the videos offered by WebAssign. And I will also publish my own short videos to explain some key concepts for each chapter.

On **Wednesdays**, it's also a good day to check announcements again, to see if I've put up any FAQs about assignments or reminders, and to take a look at the week's text pages.

On **Thursdays**, I'd recommend reading the week's handouts/articles and doing the quizzes, if applicable. I also post the "Problem and applications" for each chapter in case that you might need more practice of the lectures. It's also a good day to start the homework – at the very least, look it over so that you can make sure any questions can be answered with plenty of time for you to finish before the weekend hits.

**Sundays are the due date for all homework assignments** when applicable (see the syllabus below for these dates), due by 11:59 pm Pacific time.

See the detailed assignment listing at the end of the syllabus for reading assignments, exam due dates, etc. Especially when the course first begins, I'll post reminders – just another reason to check announcements at least a couple of times a week – but this is the master list.

### **Contacting Me**

**Please contact me directly through Email.** Remember when you email me, please including the information about which class you are in. I have more than 140 students and four classes. So, including the class information in email will help me to quickly access your questions. I'll answer emails for this class within 48 "business hours" (Monday through Friday, no holidays) at the longest.

### **Office Hours**

I don't have a physical office on campus with open office hours for this fall term. But that doesn't prevent us from meeting one on one – we just do so virtually.

**Zoom office hours:** 11:30 am -12:15 pm Thursday

<https://linnbenton.zoom.us/j/2072563553>

You can *always* make an appointment to talk to me via Zoom meeting etc. Just email me with your contact info and as big a range of available times as possible (24 hours' notice is really helpful), and we'll figure out a time that works for both of us. Hopefully this goes without saying, but asking me questions is never bothering me, and there aren't any dumb questions. I am here to help you!

## **Grades, Exams, and Homework**

Your grade will be calculated as follows:

**Examinations** – This class has three exams, worth 150 points each. You will take them on WebAssign and will have 150 minutes to take each once you start. All exams are open-book and open-notes.

See the table below for coverage:

EXAM	TOPICS
Exam 1	Chapter 1, Chapter 2, Chapter 3, Chapter 6, Chapter 7
Exam 2	Chapter 8, Chapter 9, Chapter 10
Exam 3	Chapter 12, Chapter 13, Chapter 14

Exam 1 will post at 8:00 am on Jan 19<sup>th</sup>. And it will be due at the 11:59 pm on **Sunday**, Jan 23<sup>rd</sup>.

Exam 2 will post at 8:00 am on Feb 9<sup>th</sup>. And it will be due at the 11:59 pm on **Sunday**, Feb 13<sup>th</sup>.

Exam 3 will post at 8:00 am on Mar 14<sup>th</sup>. And it will be due at the 11:59 pm on **Wednesday**, Mar 16<sup>th</sup>.

Exams are usually around 15 questions, give or take, and may include multiple-choice, mathematical, and/or fill-in-the-blank items. You will take tests online within 150 minutes and may use all class materials (book, PowerPoints, etc.) – **but not the assistance of anyone else**. This means, also, that test questions will expect you to be able to work with the material and understand examples.

## **Quizzes, Homework assignments and Exam.**

Out of fairness to all students, the grading and exam policy outlined above will be adhered to consistently.

### **Quizzes:**

- You have **2 attempts** for each assignment before the deadline and the best score will be recorded.
- There will be a **20% penalty** for late assignment submissions within a week.

**Homework assignments:**

- You have **3 attempts** for each assignment before the deadline and the best score will be recorded.
- There will be a **20% penalty** for late assignment submissions within a week.

**Exams:**

- **No make-up exam** will be given and the student will receive zero points on the exam missed. For emergency or official college business, a make-up exam will be schedule provided that the instructor is notified in advance and an official verification is presented.
- Vacation plans and airline schedules are not valid excuses, as I will post the schedule for the exams before hands.

Online Homework and Quizzes – We will complete homework and quizzes using **WebAssign**. Homework assignments and quizzes are open-book, open-note assignments for you to complete on your own time. You may feel free to work with other students as well on these homework assignments, with two cautions:

- 1) Make sure you understand the assignment; you’ll be on your own on examinations.
- 2) Some assignments may be algorithmic (this is also true of test questions). In other words, although all students will work with the same concepts, numbers may differ in math problems or the order of questions/answer choices may be different. This will often happen on exams and is just another reason never to work together on tests or print out the test for another student.

Homework and quizzes will always be due on Sunday at 11:59 pm Pacific time.

**I will post the statistics of the quizzes, homework assignments and analyze the questions with the lowest accurate rate.**

<b>Total Class Points:</b>	
Homework (12 assignments):	195 points
Quizzes:	145 points
Exams (3 @ 200):	450 points
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<b>Total points</b>	<b>790 points</b>

- >= 90% **A**
- >= 80% & <90%: **B**
- >=70% & <80%: **C**
- >=60% & <70%: **D**
- <60%: **F**

**Students Who Need Accommodations**

LBCC is committed to inclusiveness and equal access to higher education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would

like to use your accommodations in this class, please talk to me as soon as possible to discuss your needs. The Center for Accessibility Resources (CFAR) is open for business! Each business day, CFAR staff are available to students via email, phone, and Zoom. CFAR will continue to process new and current student accommodation requests and work with faculty to ensure accommodation needs are addressed during remote delivery of instruction.

If you believe you may need accommodations, but are not yet registered with CFAR, please go to <http://linnbenton.edu/cfar> for steps on how to apply for services or call 541-917-4789.

### **LBCC Comprehensive Statement of Nondiscrimination**

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

**Academic Honesty** – Students are expected to follow College policies regarding academic integrity as articulated in the [Students Rights and Responsibilities Handbook](#). You will receive a failing grade on quizzes, exams, or the course if you are found to be involved in academic dishonesty. Learning is built on the fundamental qualities of honesty, fairness, respect and trust. At LBCC, academic integrity is a shared endeavor characterized by truth, personal responsibility and high academic standards. Any violation of academic integrity devalues the individual and the community as a whole. One important aspect of academic integrity is academic honesty. Violations of academic honesty include: plagiarism, collusion/inappropriate assistance, cheating, fabrication/falsification/alteration, unauthorized multiple submissions, sabotage and tampering. **You may feel free to work in groups on the online homework assignments. That said, the work you turn in should still be your own. And all examinations in this course are to be taken on your own with no help from other students, current or former.**

Because cheating in my course hurts not me but your fellow students, to whom I have an obligation to maintain fairness, I must have a **zero tolerance policy on cheating in my course. If I am given any reason to suspect you are cheating on an examination, you will be removed from the class and will receive an XF in the course, plus additional penalties as appropriate. In the case where two students cheat off each other, this penalty will apply to both students. There will be no warning, no leniency, and no exceptions.** Please make it easier on all of us and don't even consider cheating in my class. Especially with online classes, cheating is easier to catch than you probably think.

**“Cheating” in an online course also includes printing out the test for someone else (because this allows them to take the exam without adhering to the time limit).** Simply do not do so. The tests are not easily printable anyway due to the way they are presented in Moodle or WebAssign.

## SCHEDULE OF TOPICS AND ASSIGNMENTS

PowerPoints will go up **Monday** of each week at noon. Readings chapter are recommended to have been completed (at least skimmed) *before* you study the PowerPoints.

*Any changes will be announced on the “front page” of the Moodle course page as an announcement. I’ll also often put up reminders in weekly announcements (at least while we get started). **Plan on checking Moodle at least three times a week!***

	General Theme(s) of the Week	Text Readings (Chapters)	Graded Stuff Posting	Graded Stuff Posting (at 11:59 pm)
<u>Week 1:</u> Jan 3 <sup>rd</sup> - Jan 9 <sup>th</sup>	Course Syllabus/ Introduction	Chapter One, Chapter Two	Get Started! Chapter One Quiz Chapter Two Quiz Homework (CH1) Homework (CH2): 1) Chapter 2.1 HW 2) Chapter 2.2 HW 3) Chapter 2.3 HW 4) Chapter 2.4 HW	Week 1’s assignments due Sunday Jan 9 <sup>th</sup>
<u>Week 2:</u> Jan 10 <sup>th</sup> – Jan 16 <sup>th</sup>	Descriptive Statistics/ Continues Probability Distribution	Chapter Three Chapter Six	Chapter Three Quiz Chapter Six Quiz Homework (CH3): 1) Chapter 3.1 HW 2) Chapter 3.2 HW 3) Chapter 3.3 HW Homework (CH6): 1) Chapter 6.1 HW 2) Chapter 6.2 HW	Week 2’s assignments due Sunday Jan 16 <sup>th</sup>
<u>Week 3:</u> Jan 17 <sup>th</sup> – Jan 23 <sup>rd</sup>	Sampling / Sampling Distributions	Chapter Seven <b>EXAM 1</b>	Chapter Seven Quiz Homework (CH7): 1) Chapter 7.3 HW 2) Chapter 7.5 HW <b>EXAM1</b> (Posted on Wed Jan 19 <sup>th</sup> )	Week 3’s assignments and <b>EXAM1</b> due Sunday Jan 23 <sup>rd</sup>
<u>Week 4:</u> Jan 24 <sup>th</sup> - Jan 30 <sup>th</sup>	Interval Estimation	Chapter Eight	Chapter Eight Quiz Homework (CH8): 1) Chapter 8.1 HW 2) Chapter 8.2 HW 3) Chapter 8.3 HW 4) Chapter 8.4 HW	Week 4’s assignments due Sunday Jan 30 <sup>th</sup>
<u>Week 5:</u> Jan 31 <sup>st</sup> – Feb 6 <sup>th</sup>	Hypothesis Tests	Chapter Nine	Chapter Nine Quiz Homework (CH9): 1) Chapter 9.1 HW 2) Chapter 9.2 HW 3) Chapter 9.3 HW 4) Chapter 9.4 HW	Week 5’s assignments due Sunday Feb 6 <sup>th</sup>
<u>Week 6:</u> Feb 7 <sup>th</sup> – Feb 13 <sup>th</sup>	Inferences about Means / Proportions with Two Populations	Chapter Ten <b>EXAM 2</b>	Chapter Ten Quiz Homework (CH10): 1) Chapter 10.1 HW 2) Chapter 10.2 HW 3) Chapter 10.3 HW 4) Chapter 10.4 HW <b>EXAM 2</b> (Posted on Wed Feb 9 <sup>th</sup> )	Week 6’s assignments and <b>EXAM2</b> due Sunday Feb 13 <sup>th</sup>

Week 7: Feb 14 <sup>th</sup> – Feb 20 <sup>th</sup>	Comparing Multiple Proportions Test of Independence Test of Goodness Fit	Chapter Twelve	<b>Chapter Twelve Quiz Homework (CH12):</b> 1) Chapter 12.1 HW 2) Chapter 12.2 HW 3) Chapter 12.3 HW	Week 7's assignments due Sunday Feb 20 <sup>th</sup>
Week 8: Feb 21 <sup>st</sup> – Feb 27 <sup>th</sup>	Experimental Design Analysis of Variance	Chapter Thirteen	<b>Chapter Thirteen Quiz Homework (CH13):</b> 1) Chapter 13.2 HW 2) Chapter 13.3 HW	Week 8's assignments due Sunday Feb 27 <sup>th</sup>
Week 9: Feb 28 <sup>th</sup> – Mar 6 <sup>th</sup>	Simple Linear Regression	Chapter Fourteen	<b>Chapter Fourteen Quiz Homework (CH14):</b> 1) Chapter 14.2 HW 2) Chapter 14.3 HW 3) Chapter 14.5 HW 4) Chapter 14.6 HW	Week 9's assignments due Sunday Mar 6 <sup>th</sup>
Week 10: Mar 7 <sup>th</sup> – Mar 13 <sup>th</sup>	Final Review			
Week 11: Mar 14 <sup>th</sup> – Mar 16 <sup>th</sup>	Exam 3		<b>EXAM 3 will post on Mar 14<sup>th</sup></b>	<b>EXAM 3 dues on Mar 16<sup>th</sup></b>

***All assignments –quizzes, homework assignments – will be due at the same time on the given due date.***

***Exams are not allowed to make up.***

Something to think about: The organization that accredits colleges in the United States recommends a minimum of three hours spent working outside of class for every credit hour of the course in addition to the time spent in lecture. We don't have lectures on campus, so that guideline should probably be raised to four hours x four hours of credit = 16 hours per week.

This implies that, to fully understand this material and do well in the class, you should spend about 16 hours a week listening to and taking notes on the lectures, working on practice problems and graded assignments, working with me if you have questions, and studying for exams. If you are putting in this time and not getting the results you expected, it may be a matter not of studying too little but of not studying in the most efficient way. *I can help you with this – just ask!*