BA 240 – STATISTICAL ANALYSIS

FALL 2015 COURSE SYLLABUS

Instructor:	Winnie Li
Class Time/Place:	Tues/Thur 12:30pm – 2:20pm @ C-165
E-mail:	Please use Canvas Mail. Make sure you put down BA 240 in the subject line. I have multiple classes to track through Canvas, and this helps me to organize your email (and get prompt response). Alternate email: Winnie.Li@bellevuecollege.edu
Phone:	425-564-2825
Office location:	C207-I (Letter "I")
Office Hours:	Tues/Thur 10:30am – 12:00pm or by Appointment

COURSE INFORMATION

Surveys techniques used in decision-making and research. Topics include descriptive and inferential statistics, probability, central tendency, variablitiy, normal and t-distributions, hypothesis testing, and regression. Materal has applications in business, health care, etc.

COURSE OUTCOMES

After completing this class, students should be able to:

- Identify the relationship between data analytics and business decision-making process
- Analyze and evaluate research methodologies
- Identify the most common data analytics methods and discuss how each method best applies to specific analytics questions
- Identify the most common technological tools used in data analytics
- Evaluate business problems and determine suitable analytical methods
- Use technological tools such as Excel or R to manage data sets in various sizes and formats
- Interpret research study results and clearly state the conclusion in reports and presentations with close attention to details

PREREQUISITE:

- MATH 138 or MATH& 141 with a C or better
- Intermediate computer skills and prior experience with Word, Excel and PowerPoint are required.

BOOKS AND MATERIALS REQUIRED:

Textbook: **Statistics** Tenth Edition, by McClave and Sincich, Prentice Hall 2006

Sortware: Excel 2007 or newer

Others: Calculator (Minimum Requirement: TI-30) and USB Flash Drive

TOPICS COVERED:

Chapter 1:	Introduction
Chapter 2:	Descriptive Statistics
Chapter 3:	Probability
Chapter 4:	Discrete Distribution
Chapter 5:	Continuous Distribution
Chapter 6:	Sampling Distribution
Chapter 7:	Confidence Interval
Chapter 8/9:	Hypothesis Testing (One Sample / Two Samples)
Chapter 10:	Analysis of Variance (Depends on Time Availability)
Chapter 11/12:	Regressiong Analysis (Simple / Multiple)

COURSE REQUIREMENT

THIS IS A TIGHTLY-SCHEDULED AND FAST-PACED COURSE, THE LATER MATERIALS ARE BUILT ON TOP OF THE PREVIOUS MATERIALS AND GET HARDER AND HARDER. WE HAVE NO TIME TO TAKE A BREAK OR REVISIT MATERIAL – IT IS VERY HARD TO CATCH UP IF YOU SLACK OFF.

For the first 1/3 of the course, we will cover about TWO chapters per week, then slow down to ONE chapter a week as the materials get much more complicated after Chapter 7. For the last couple of weeks of the quarter, we will be very busy with the team project. See "Study Schedule" for details.

Check Course Website Frequently! Course Documents (including Syllabus, Updated Schedule, Lecture Notes, Homework Solution and Project Information) will be posted regularly. ALL due dates are posted under Canvas Calendar (some are subject to change). Students will not be given extension(s) unless they have extenuating circumstances as decided by the instructor, and students must contact the instructor 48 hours before the due date to make such arrangements.

There is a significant amount of work in this class. You can expect to spend a minimum of 15 hours per week to study and to complete the assigned work. Make sure that you can spend at least that much time this quarter***. If you are overloaded with other courses or work, this may NOT be the right time for you to take this class.*** FOR YOUR BENEFIT, DO NOT OVERLOAD.

You are expected read the course documents, textbook, books 24x7, tutors and Web resources, and use the discussion and chat tool to seek assistance from classmates and the instructor. DO NOT post files that are assigned as homework to the discussion area unless specifically directed to do so.

- Attend ***ALL*** classes, and ***turn off*** cell phones during class. ***Preview*** and ***print out*** the lecture notes ***before*** class, make sure you leave enough spaces to write down MORE notes, and ***Review*** lecture notes ***after*** class.
- Make good use of the resources (solution manual, available documents and resources in course website), see tutors for special help.
- Homework assignments are really the **minimum** requirement for exercises and must be turned in ***ON TIME (at the beginning of the class)***. You need to do a lot more extra work and especially chapter review problems on your own in order to succeed.
- **Study in groups** and **start early** on projects.

GRADING COMPONENTS:

Attendance and Participation:	5%
Assignments:	10%
Quizzes:	10%
Project:	20%
Exams:	30%
Final:	25%
Total	100%

ASSIGNMENTS (10%)

There are 10 homework assignments; each assignment contains 5 textbook questions (except homework 2). You may find the assigned reading assignments and homework problems at the LAST couple slides (before the "END" slide) of each chapter lecture notes, as well as from the course website → Assignment

Please note:

1: Since this textbook is an older edition, there are a number of small errors I have noticed in both the textbook and the solution manual. **I have tried my best to correct as many as I could in the lecture notes, therefore make sure you treat lecture notes as the "model" if there are any "conflicts" between the textbook and the lecture notes.** Also, please feel free to let me know if you notice any errors (in both the textbook or the lecture notes).

2: For lecture purpose, the slides in the video lecture are generally MORE than the PowerPoint slides posted under lecture notes folder. **Make sure you have the lecture notes ready when coming to class and/or watching the video lectures, and be sure to take MORE NOTES!!**

3: You may either hand write or type your assignment. All assignments are due **at the beginning of the class**, and will be accepted only if you are present in class. Any assignment turned in **5 minutes** past the starting of the class will be considered late.

Late Work Policy: Any work received after the due date is considered late. Students will not be given extensions unless they have extenuating circumstances as decided by the instructor (you must contact me **48 hours before** the due date to make such arrangements).

Since extreme circumstances do occur in everyone's life, each student will have a total of **3 FREE late days:**

1) A free late day allows you to submit an assignment up to 24 hours late without penalty. For example, you could submit an assignment due Tuesday 9pm on Wednesday by 9pm with no penalty by spending 1 free late day.
2) You may choose to use the late days in any way you desire. For example, you could use 2 late days on Assignment 2 and 1 late day on Assignment 5, or spending all 3 on Assignment 7.
3) Late days are counted by CALENDAR DAY, each late day may only apply to ONE assignment, and may ONLY be used on homework (NOT applicable on take-home quiz, project, or extra credit assignment).
4) Once a student has used up all 3 free late days, there will be no late homework will be accepted. **Note: All late assignments must be submitted to D-110 for date stamp. Make sure you put down the section number and the instructor's name clearly.**
5) NO credit will be given after the homework solution has posted, regardless how many free late days you have left.

QUIZZES (10%)

There are eight quizzes total, some are in-class, and others will be take home. Each quiz is worth 20 points, and is limited to 15 minutes long. Quizzes that are given in class are closed book and closed notes, but you are allowed to bring two sheets of standard letter (8.5" x 11") sized cheat-cheats, which can be used on both sides.

PROJECT (20%)

Project includes THREE parts:

1) **Team Contract (10 Poitns):** Gather in groups (each group is limited to 2 to 4 team members). Select a data set that satisfies the requirements. Split up work evenly and complete the Team Project Contract. See ***Modules → Project Part 1*** for more information.
2) **Individual Report (90 Points):** Each team member choose ONE variable (NO two team members may obtain the SAME variable). Complete a basic descriptive statistics analysis on your chosen variable using EXCEL, and complete an individual report. See ***Modules → Project Part2*** for more information.
3) **Team Report (100 points):** Work in teams, complete a multiple regression analysis using EXCEL, and complete a group report. See ***Modules → Project Part2*** for more information.

Note: No late project will be accepted.

MIDTERM EXAMS (30%) AND FINAL (25%)

There are a total of three exams given in class, at approximately the 4th, the 8th, and the 11th week. The first two exams are midterms, and the last one is final. Exam 1 covers Ch 1 through Ch 4, Exam 2 covers Ch 5 through Ch 8, and Final exam is cumulative (but 80%+ covers the materials after Exam 2). Exams are closed book, closed notes, however, you can bring a couple pages of cheat sheet. Detailed exam information/instruction will given in class approximately one week before the exam date.

GRADING POLICY

Final Grade is given based on:

93 – 100%	925 -- 1000	A	4
90 – <93	900 – 924	A-	3.7
87 – <90	875 – 899	B+	3.3
83 – <87	825 – 874	B	3.0
80 – <83	800 – 824	B-	2.7
77 – <80	775 – 800	C+	2.3
73 – <77	725 – 774	C	2.0
70 – <73	700 – 724	C-	1.7
67 – <70	675 – 699	D+	1.3
60 – <67	600 – 674	D	1.0
Below 60	Below 600	F	0

Note 1: A passing grade will not be given unless ALL REQUIREMENTS of the course are completed.

Note 2: In order to be fair to everyone, NO GRADE NEGOTIATION!!!

INSTRUCTOR'S EXPECTATION

My role as the instructor is to:

- Help students succeed in this course
- Share my knowledge an dexperiences to help expand on concepts discussed in the course
- Provide timely feedback to students
- Moderate discussions anad challenge students to further therir knowledge
- Evalouate and grade students

As a student in this course, I expect you to:

- Work hard to achieve the goals of the course
- Actively contribute to any dicussions
- Share your thoughts, knowledge and experiences
- Cooperate and collaborate with other students
- Provide feedback to me throughtout the course

OTHER INFORMATION

AFFIRMATION OF INCLUSION

Bellevue College is committed to maintaining an environment in which every member of the campus community feels welcome to participate in the life of the college, free from harassment and discrimination.

We value our different backgrounds at Bellevue College, and students, faculty, staff members, and administrators are to treat one another with dignity and respect. http://bellevuecollege.edu/about/goals/inclusion.asp

STUDENT CODE OF CONDUCT AND ACADEMIC INTEGRITY

Cheating, stealing, and plagiarizing (using the ideas or words of another as one's own without crediting the source) and inappropriate/disruptive classroom behavior are violations of the Student Code of Conduct at

Bellevue College. Examples of unacceptable behavior include, but are not limited to, talking out of turn, arriving late or leaving early without a valid reason, allowing cell phones/pagers to ring, and inappropriate behavior toward the instructor or classmates. The instructor can refer any violation of the Student Code of Conduct to the Dean of Student Success for investigation. Specific student rights, responsibilities, and appeal procedures are listed in the Student Code of Conduct at: http://www.bellevuecollege.edu/policies/id-2050/

BELLEVUE COLLEGE E-MAIL AND ACCESS TO MYBC

All students registered for classes at Bellevue College are entitled to a network and e-mail account. Your student network account can be used to access your student e-mail, log in to computers in labs and classrooms, connect to the BC wireless network and log in to *My*BC. To create your account, go to: https://www.bellevuecollege.edu/netid/.

BC offers a wide variety of computer and learning labs to enhance learning and student success. Find current campus locations for all student labs by visiting the http://depts.bellevuecollege.edu/helpdesk/students/

DISABILITY RESOURCE CENTER (DRC)

The Disability Resource Center serves students with a wide array of learning challenges and disabilities. If you are a student who has a disability or learning challenge for which you have documentation or have seen someone for treatment and if you feel you may need accommodations in order to be successful in college, please contact us as soon as possible.

If you are a person who requires assistance in case of an emergency situation, such as a fire, earthquake, etc, please meet with your individual instructors to develop a safety plan within the first week of the quarter.

If you are a student with a documented autism spectrum disorder, there is an additional access program available to you. Contact asn@bellevuecollege.edu or 425.564.2764. ASN is located in the Library Media Center in D125. www.bellevuecollege.edu/autismspectrumnavigators/

The DRC office is located in B132 or you can call our reception desk at 425.564.2498. Deaf students can reach us by video phone at 425-440-2025 or by TTY at 425-564-4110. Please visit our website for application information into our program and other helpful links at www.bellevuecollege.edu/drc

PUBLIC SAFETY AND EMERGENCIES

Public Safety is located in the K building and can be reached at **425-564-2400** (easy to remember because it's the only office on campus open 24 hours a day—2400). Among other things, Public Safety serves as our Parking

Permits, Lost and Found, and Emergency Notification center. Please ensure you are signed up to receive alerts through our campus alerting system by registering at http://www.bellevuecollege.edu/alerts/?ref=footer

If you work late and are uneasy about going to your car, Public Safety will escort you to your vehicle. To coordinate this, please phone ahead and let Public Safety know when and where you will need an escort.

Please familiarize yourself with the emergency postings by the door of every classroom and know where to go in the event of an evacuation. Your instructor will be asked if anyone might still be in the building, so check in before you do anything else. Emergency responders will search for anyone unaccounted for.

If a major emergency occurs, please follow these two rules:

1) Take directions from those in charge of the response -We all need to be working together.

2) Do not get in your car and leave campus (unless directed to) - Doing so will clog streets and prevent emergency vehicles from entering the scene. Instead, follow directions from those in charge.

Please do not hesitate to call Public Safety if you feel safety questions or concerns at any time.

ACADEMIC CALENDAR

Please see Study Schedule and Canvas Calendar for details.

BA 240 Fall 2015 Tentative Schedule

(Subject to adjustment – changes will be announced at the beginning of class)

DATE	READING TOPICS	HOMEWORK	QUIZZES	EXAMS	PROJECT
Sep 22	Syllabus, Overview, Chapter 1: 1.1 – 1.6 Chapter 2: 2.1 – 2.2	Math Assessment Test			
Sep 24	Chapter 2: 2.3 – 2.8				
Sep 29	Review Chapters 1 and 2 Chapter 11: 11.1 – 11.3	HW 1 Due (Ch. 1)	Quiz 1		
Oct 1	Chapter 3: 3.1 – 3.7 Chapter 4: 4.1	HW 2 Due (Ch. 2)	Quiz 2		
Oct 6	Chapter 4: 4.2 – 4.4 Exam 1 Review	HW 3 Due (Ch. 3)	Quiz 3		
Oct 8	Chapter 5: 5.1 – 5.2	HW 4 Due (Ch. 4)	Quiz 4		Part 1: Data & Contract Due
Oct 13				Exam 1 (Ch. 1-4)	
Oct 15	Chapter 5: 5.3 Chapter 6: 6.1 – 6.3				
Oct 20	*☺ No Class ☺*				
Oct 22	Chapter 7: 7.1 – 7.5 *Excel Lab*	HW 5 Due (Ch. 5 and 6)			
Oct 27	Chapter 8: 8.1 – 8.2		Quiz 5		
Oct 29	Chapter 8: 8.3 – 8.5	HW 6 Due (Ch. 7)			Part 2: Individual Report Due
Nov 3	Review Chapter 8 Exam 2 Review		Quiz 6		
Nov 5	Chapter 9: 9.1 – 9.2	HW 7 Due (Ch. 8) HW 8 Due (Ch. 8)			
Nov 10				Exam 2 (Ch. 5-8)	
Nov 12	Chapter 9: 9.3 – 9.4 Chapter 11 Overview				
Nov 17	Review Chapter 9	HW 9 Due (Ch. 9)			

	Chapter 11: 11.3 – 11.9				
Nov 19	Chapter 12: 12.11 Team Project Demo	HW 10 Due (Ch.9)	Quiz 7		
Nov 24	*Excel Lab*				
Nov 26	*☺No Class ☺*				
Dec 1	Team Project Q & A *Excel Lab*		Quiz 8		
Dec 3	Review Chapters 9 – 12 Potluck Party				Part 3: Team Report Due
Dec 8	Final Exam			Final Exam (Ch. 1-12)	