TEXAS A&M
UNIVERSITY
COMMERCE

TENTATIVE SYLLABUS - ECO 578

Statistical Methods

Summer II – 2022

Instructor: Dr. Chuck Arize
Office Location: BA 212
Office Hours: Tuesday & Thursday 7.00 P.M. – 9.00 P.M.
Office Phone: (903) 886-5691
Office Fax: (903) 886-5601
University Email Address: chuck.arize@tamuc.edu

Preferred Form of Communication: Web Based Class
Communication Response Time: We would respond to your emails within 24 hours except on weekends.

In order to get grades for assigments and exams, you must submit the files for "Academy Dishonesty" and "Personal Information" under the D2L. please refer to the first page of the class notebook for how to turn in these two files.

You can find useful marterials under the D2L content tab to help you success in this class. The previous recorded presentation videos and slides can be found under the D2L.

D2L Content Structure:

Module 1: Chapter 1 to Chapter 3;

Module 2: Chapter 4 to Chapter 7;

Module 3: Chapter 8 to Chapter 10;

Module 4: Chapter 11 to Chapter 15;

THIS SYLLABUS IS TENTATIVE

COURSE INFORMATION

Textbook (Required): **Statistics for Management and Economics edition 6 or 7 by Gerald Keller publisher: Thomson South-Western**

**Some students who passed this couerse found this book to also be helpful:

"Statistics Classnotes ECO 578 Summer 2021: from the university bookstore (you can call 903-886-5830, 903-886-5825, or 903-886-2692)

Optional but not required text: Since you have had BA541 or BA302, you may find a book in the library as supplement.

PowerPoint: In order to gain more understanding in the class notebook, all of you must go through the PowerPoint of each chapter thoroughly. See content in D2L for more information.

IMPORTANT NOTICE

*** Note that this is a tentative syllabus meaning that I can change (a) certain dates for the exams and (b) certain topics to be covered.

***** Since this is a graduate statistics course, I will constantly assume that students have mastered undergraduate statistics work.** **My classnote covers the most relevant materials, so a student may refer to other texts, if necessary. However, I believe that a student can make an "A" using only the classnote book.**

*** If you have not taken any statistics course in the last two years, my suggestion is that you borrow a statistics book from the nearest library to aid your understanding of my classnotes or take the first pre course BA 501. However, I will focus on the classnotes while teaching the class.

***** Also, note that I do not return your graded paper, but upon request I will be able to tell you what you missed on a test via e-mail. (Request period is 2 days after receiving an exam grade)**

*** Although you have your classnote book as well as other books, available in the library, you are not permitted to copy from your textbook due to copyright protection for author and publishers. We have continued to fund excellence/scholarships from the residual from the sales of classnotes since 1994, we have given over 262 awards from this fund.

*** Please do not ask for an early, delayed or special exam, as we treat all the students equally and fairly. Since the exam dates are already provided to you in advance, thus you need to plan your holidays in advance such that it does not coincide with the exam days.

***Any communication, in any form with other students relating to the Exam content while the exam is open will be considered cheating and the penalty would apply as determined by the professor thus refrain at all cost.

You can find useful materials under the D2L content tab to help you success in this class. The previous recorded presentation videos and slides can be found in D2L.

This is an online class and requires the student to be more SELF-DIRECTED. You are responsible for all the material in the chapters assigned whether I discuss that material in the class live or NOT. When we have a class live it is an opportunity to touch on a subject you should have already read over. Not a time to teach everything.

Summer courses move at an **EXTREMELY RAPID PACE.** You are essentially charged with completing three weeks of material in one week. You will need to "attend" this course daily online through YouSeeU. Proper studying will be done through a combination of reading the text, attending classlive or viewing recorded version. Most important is paying attention to materials the professor views as relevant. Grading for the course is covered below. At this writing, I plan to be online Monday and Wednesday between 7PM and 8PM to conduct classlive on the material for each week. You can access these sessions live through YouSeeU or watch them at a time more convenient for you. Each session will be recorded.

Course Description: A course dealing with statistical concepts, including measures of central tendency and dispersion, probability distributions, the Central Limit Theorem, Sampling, Estimation, Hypothesis testing, Analysis of Variance, Correlation and Regression analysis, Multiple Regression and Statistical Forecasting and Non parametric tests

Additional Course Description: Course Prerequisite BA 302/ BA 501/ ECO 302 / ECO 502 or acceptable undergraduate course in statistics.

Student Learning Outcomes

Course Objectives: The objective of this course is to provide a foundation for the graduate business student on basic principles of statistics to include measurements of location and dispersion, probability, probability distributions, sampling, estimation, hypothesis testing, regression and correlation analysis, and multiple regression. The following are specific objectives for the course that the student will:

1) Learn how to calculate and apply measures of location and measures of dispersion -- grouped and ungrouped data cases.

2) Learn how to apply discrete and continuous probability distributions to various business problems.

3) Understand the hypothesis testing:
   3.1 Be able to perform Test of Hypothesis
   3.2 Calculate confidence interval for a population parameter for single sample and two sample cases.
   3.3 Understand the concept of p-values.

4) Learn non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit.

5) Understand regression analysis:
   5.1 Be able to compute and interpret the results of Bivariate Regression
   5.2 Be able to compute and interpret the results of Multivariate Regression.
   5.3 Be able to compute and interpret Correlation Analysis
   5.4 Be able to perform ANOVA and F-test.
   5.5 Be able to understand both the meaning and applicability of a dummy variable.
   5.6 Be able to understand the assumptions which underline a regression model.
   5.7 Be able to perform a multiple regression using computer software.

COURSE REQUIREMENTS

Materials we provide for the Class:

1. We provide Power Point Presentation for each lecture. You can go to myleo and visit e-College you will find the Module on the left hand and then click lecture, then you can listen to the video for the specific chapter. If you want to print out a specific Power Point, you can go to Doc‑ sharing, and click Power Point version and scroll down to see the downloadable documents so you can print it out.

2. In classnotes, there are lots of examples and exercises to learn and practice.

3. In Doc-sharing, we also provide the solutions for selected questions so that you can check your work after finished. You can download the solutions of the homework and use them to practice.

4. We do have class-live sessions, and you will be informed before each class-live session.

5. In welcome email which we send you at the beginning of the semester, you will find the attached files. You can review these documents before your book arrives so that you do not get behind the class.

Student Responsibilities: Classroom Demeanor --"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." See Student's Guide Book.

GRADING

Grading: Each student's grade will be comprised of a midterm exam (30%), a final exam (50%), and a homework assignment (20%).

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Grading Policy: Grade Component

Online Class	
	Weight %
Midterm Exam	30%
Final Exam	50%
Homework	20%
Total	**100%**

Assessments:

Grade explanation of assessment type (percentage or points toward final grade)

COURSE OUTLINE / CALENDAR

TENTATIVE

HOMEWORK SCHEDULE:

Homework	Homework Starting Time	Homework Ending Time
Homework 1	July 22 (Fri)	July 25 (Mon)

EXAMS SCHEDULE:

Exams	Exams Uploaded by Noon (CST)	Due Date by Noon (CST)	Chapters Covered
Midterm Exam	July 29 (Fri)	August 1 (Mon)	2, 3, 4, 5, 6, 7
Final Exam	August 4 (Thur)	August 8 (Mon)	Comprehensive

***For more details concerning the above course objectives, see the last page.
Texas A&M University-Commerce
College of Business & Technology
Student Appeal of Course Grade
(Refer to TAMUC Procedure: 13.99.99.R0.05)

TEXAS A&M UNIVERSITY-COMMERCE PROCEDURE

13.99.99. R0.05 Student's Appeal of Instructor's Evaluation Effective September 1, 1996
Revised December 15, 1999 Revised February 8, 2007 Supplements System Policy 13.02

1. The final grades awarded by faculty members are their expert judgment concerning student performance. Students challenging a final grade must show that the instructor's judgment was unfair based on: a) some basis other than performance, or b) standards different from those applied to other students in the same course section, or c) a substantial, unreasonable, and unannounced departure from previously articulated standards or the syllabus.

2. Students who believe their grade to be unfair must first discuss the matter with the instructor.

3. If no satisfactory resolution is reached with the instructor, or if the instructor is unavailable, the student shall appeal to the Department Head. A grade appeal must be initiated in writing with the Department Head (or Dean if the Department Head is the instructor) within six (6) months of the last day of the semester in which the grade was awarded. The Department Head will examine the student's appeal to determine whether the student has established an apparent case of unfair academic evaluation as described in section 1. If the student has not established a case that appears to have merit, the Department Head will so inform the student and the instructor without delay.

4. If the case has merit, the Department Head will secure, from all parties, written statements and other such information as he or she deems helpful and will issue his or her findings and remedies, if any. In so doing, the Department Head will be guided by the principle burden of proof lies with the student.

5. The instructor or the student may appeal the Department Head's decision (with respect to findings and remedies) to the Dean of the College in which the course is offered within 30 days of the date on which the Department Head offered his or her judgment.

6. Upon receipt of an appeal, the Dean will appoint a three-person advisory committee of faculty to hear the case. The chair of the committee will be from a department other than the one offering the course in question. The two remaining committee members will be from the department offering the course. One of these faculty members may be suggested by the author of the appeal. The instructor and the student may file additional statements. The committee will review all written materials and may seek other information, as they deem appropriate. After reviewing all information, the committee will communicate their findings and suggested remedies, if any, to the Dean.

7. The Dean is the final authority on issues of fairness in course evaluation. He or she will consider the recommendations of the committee, but has wide latitude in resolving the matter. The Dean too will be guided by the principle that the student must show the evaluation to have been unfair as identified in Section 1.

8. The Dean is responsible for notifying the Office of the Registrar of any decision requiring a change in records.

References:

Prior ETSU Policies V C 1.1 and B-32 approved October 7, 1977; revised September 1, 1979, January 19, 1990, July 30, 1998, and December 15, 1999; Procedure A13.06
    ****
CONTACT FOR INTERPRETATION: Provost and Vice President for Academic Affairs

<u>NOTE THE FOLLOWING</u>

1. This syllabus is tentative for the semester. It is meant to be a guide. Certain topics may be stressed more or less than indicated in the class notebooks and, depending on class progress, certain topics may be omitted.

2. Homework problems may be recommended on a regular basis.

3. Missed examination: A missed examination will be considered as 'F'.

TECHNOLOGY REQUIREMENTS

• To fully participate in online courses, you will need to use a current Flash enabled browser. For PC users, the suggested browser is Google Chrome or Mozilla Firefox. For Mac users, the most current update of Firefox is suggested.

• You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
  o 512 MB of RAM, 1 GB or more preferred
  o Broadband connection required courses are heavily video intensive
  o Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

• You must have a:
  o Sound card, which is usually integrated into your desktop or laptop computer
  o Speakers or headphones.
  o *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

• Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site http://www.java.com/en/download/manual.jsp

• Current anti-virus software must be installed and kept up to date.

• Run a browser check through the Pearson LearningStudio Technical Requirements website. Browser Check http://help.ecollege.com/LS_Tech_Req_WebHelp/en-us/#LS_Technical_Requirements.htm#Browset

Running the browser check will ensure your internet browser is supported.
  Pop-ups are allowed.
  JavaScript is enabled.
  Cookies are enabled.

• You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  o Adobe Reader https://get.adobe.com/reader/

- o [Adobe Flash Player](https://get.adobe.com/flashplayer/) *(version 17 or later)* https://get.adobe.com/flashplayer/
- o [Adobe Shockwave Player](https://get.adobe.com/shockwave/)   https://get.adobe.com/shockwave/
- o [Apple Quick Time](http://www.apple.com/quicktime/download/)   http://www.apple.com/quicktime/download/

- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

- For additional information about system requirements, please see: [System Requirements for LearningStudio](https://secure.ecollege.com/tamuc/index.learn?action=technical)   https://secure.ecollege.com/tamuc/index.learn?action=technical

Internet Access
An Internet connection is necessary to participate in discussions and assignments, access readings, transfer course work, and receive feedback from your professor. View the requirements as outlined in Technology Requirements above for more information.

myLeo Support
Your myLeo email address is required to send and receive all student correspondence. Please email helpdesk@tamuc.edu or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at [myLeo](https://leo.tamuc.edu). https://leo.tamuc.edu **Learner Support**
Go to the following link [One Stop Shop](http://www.tamuc.edu/admissions/onestopshop/)- created to serve you by attempting to provide as many resources as possible in one location. http://www.tamuc.edu/admissions/onestopshop/
Go to the following link [Academic Success Center](http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/)- focused on providing academic resources to help you achieve academic success.
http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/

FREE MOBILE
APPS

The Courses apps for phones have been adapted to support the tasks students can easily complete on a smaller device. Due to the smaller screen size course content is not presented.

The Courses app is free of charge. The mobile Courses Apps are designed and adapted for different devices.

PEARSON COURSES	**App Title:**	**iPhone –** Pearson LearningStudio Courses for iPhone **Android** – LearningStudio Courses - Phone
	Operating System:	**iPhone** - OS 6 and above **Android** – Jelly Bean, Kitkat, and Lollipop OS
	iPhone App URL:	https://itunes.apple.com/us/app/pearson-learningstudio-courses/id977280011?mt=8
	Android App URL:	https://play.google.com/store/apps/details?id=com.pearson.lsphone

Once downloaded, search for Texas A&M University-Commerce, and it should appear on the list. Then you will need to sign into the myLeo Mobile portal.

The Courses App for Android and iPhone contain the following feature set:

• View titles/code/Instructor of all Courses enrolled in online
• View and respond to all discussions in individual Courses
• View Instructor Announcements in individual Courses
• View Graded items, Grades and comments in individual Courses
• Grade to Date
• View Events (assignments) and Calendar in individual Courses
• View Activity Feed for all courses
• View course filters on activities
• View link to Privacy Policy
• Ability to Sign out
• Send Feedback

COMMUNICATION AND SUPPORT

Students can email to communicate with Professor. The email will be responded during the week day. However the Subject of the Email should have the course name as "**ECO 578 – Summer I 2020 -01W** "

Brightspace Support
Need Help?
Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words "click here" to submit an issue via email.

Technical Problems

For issues with Brightspace/D2L you must contact Academic Technology. I have no knowledge about any of the university's software beyond how I use it. Emailing me about tech issues only delays getting an answer or a solution to the problem you are having. I do not have access the software, your machine, your internet connection to TAMUC or the rest of the world to be of any assistance with a technical problem.

System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures
Attendance/Lateness, Late Work, Missed Exams and Quizzes and Extra Credit

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures
Student Conduct
All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See current Student Guidebook*).*

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette
 http://www.albion.com/netiquette/corerules.html
ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library- Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: Rebecca.Tuerk@tamuc.edu

Website: Office of Student Disability Resources and Services
http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

Nondiscrimination Notice
Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry
Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to
((http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34Safety OfEmployeesAndStudents/34.06.02.R1.pdf) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

Rubric:

Criteria (Course Objectives)	1 (Unsatisfactory)	2 (Emerging)	3 (Proficient)	4(Exemplary)
1) Learn how to calculate and apply measures of location and measures of dispersion -- grouped and ungrouped data cases.	Student cannot and apply any measures of location and measures of dispersion for grouped and ungrouped data.	Student can and apply some measures of location and measures of dispersion for grouped and ungrouped data.	Student can and apply most measures of location and measures of dispersion for grouped and ungrouped data.	Student can and apply all measures of location and measures of dispersion for grouped and ungrouped data.
2) Learn how to apply discrete and continuous probability distributions to various business problems.	Student cannot apply discrete and continuous probability distributions to any business problems.	Student can apply discrete and continuous probability distributions to some business problems.	Student can apply discrete and continuous probability distributions to most of business problems.	Student can apply discrete and continuous probability distributions to all of business problems.
3)Understand the hypothesis testing: 3.1 Be able to perform Test of Hypothesis 3.2 calculate confidence interval for a population parameter for single sample and two sample cases. 3.3 Understand the concept of p-values.	3.1 Student cannot perform the test of hypothesis 3.2 Student cannot calculate confidence interval for a population parameter for single sample and two sample cases. 3.3 Student doesn't understand the concept of p-value.	3.1 Student can perform some test of hypothesis 3.2 Student can calculate some confidence interval for a population parameter for single sample and two sample cases. 3.3 Student understands some part of the concept of p-value.	3.1 Student can perform most test of Hypothesis 3.2 Student can calculate most confidence interval for a population parameter for single sample and two sample cases. 3.3 Student understands most part of the concept of p-values.	3.1 Student can perform all test of Hypothesis 3.2 Student can calculate all confidence interval for a population parameter for single sample and two sample cases. 3.3 Student understands the entire concept of p-values.
4) Learn non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit.	4) Student doesn't know non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit.	4) Student knows some parts of non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit.	4) Student knows most parts of non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit.	4) Student knows all parts of non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit.

5) Understand regression analysis:				
5.1 Be able to compute and interpret the results of Bivariate Regression	5.1 Student cannot compute and interpret the results of Bivariate Regression	5.1 Student can compute and interpret some of the results of Bivariate Regression	5.1 Student can compute and interpret most of the results of Bivariate Regression	5.1 Student can compute and interpret all of the results of Bivariate Regression
5.2 Be able to compute and interpret the results of Multivariate Regression.	5.2 Student cannot compute and interpret the results of Multivariate Regression	5.2 Student can compute and interpret some of results of Multivariate Regression	5.2 Student can compute and interpret most of results of Multivariate Regression	5.2 Student can compute and interpret all of results of Multivariate Regression
5.3 Be able to compute and interpret Correlation Analysis	5.3 Student cannot compute and interpret Correlation Analysis	5.3 Student can compute and interpret some parts of Correlation Analysis	5.3 Student can compute and interpret most parts of Correlation Analysis	5.3 Student can compute and interpret all parts of Correlation Analysis
5.4 Be able to perform ANOVA and F-test.	5.4 Student cannot solve any questions regarding ANOVA and F-test.	5.4 Student can solve easy questions regarding ANOVA and F-test.	5.4 Student can solve medium-hard questions regarding ANOVA and F-test.	5.4 Student can solve difficult questions regarding ANOVA and F-test.
5.5 Be able to understand both the meaning and applicability of a dummy variable.	5.5 Student cannot apply the dummy variable to solve any questions.	5.5 Student cannot apply the dummy variable to solve some questions.	5.5 Student cannot apply the dummy variable to solve most questions.	5.5 Student cannot apply the dummy variable to solve all the questions.
5.6 Be able to understand the assumptions which underline a regression model.	5.6 Student does not understand the assumptions which underline a regression model.	5.6 Student understands some parts of the assumptions which underline a regression model.	5.6 Student understands most parts of the assumptions which underline a regression model.	5.6 Student understands all parts of the assumptions which underline a regression model.
5.7 Be able to perform a multiple regression using computer software.	5.7 Student is unable to perform a multiple regression using computer software.	5.7 Student is able to perform a multiple regression using computer software for easy questions.	5.7 Student is able to perform a multiple regression using computer software for medium-hard questions.	5.7 Student is able to perform a multiple regression using computer software for difficult questions.