

Course Syllabus: AEB 5516
Quantitative Methods in Agribusiness Decisions (3 credits)

Summer 2020

Period 3, Monday-Friday 9:30 am -10:45 pm

Synchronous Class Meetings on Tu/Th via zoom:

<https://ufl.zoom.us/j/97924105778?pwd=N1MzYkJwYWdibWtCTEhoVVpCUGU5QT09>

Meeting ID: 979 2410 5778

Password: 026072

Optional Class Office Hours on MWF via zoom with Dr. Sharp:

<https://ufl.zoom.us/j/98987393649?pwd=V3hkOE53bjI0UVpNSm1Vbi8rcEZLZz09>

Meeting ID: 989 8739 3649

Password: 408584

Learning Team Contact Information

Instructor: *Dr. Misti Sharp*; mistisharp@ufl.edu; Zoom office hours MWF 11-12:20 and by appointment: <https://ufl.zoom.us/j/902541919>

Teaching Assistants: *Ms. Fei He*; he.fe@ufl.edu; Zoom office hours: Wed, 3 – 5
(<https://ufl.zoom.us/j/6096427860> Meeting ID: 609 642 7860)

Ms. Carolina Navarrete; cnavarrete@ufl.edu; Zoom office hours: Mon, 5 – 6:30
<https://ufl.zoom.us/j/93926553531?pwd=SkhqOUhxWXpZVEFueWMwZ1IndjVJZz09> Meeting ID: 939 2655 3531 Password: 085178

Course Description (from Catalog): Introduction to a variety of quantitative methods with application to business decision-making contexts.

Prerequisites: It is the expectation that students have completed introductory Food and Resource Economics coursework including AEB 3103 (Principles of FRE) and AEB 3510 (Quantitative Methods in FRE). It is further expected that students have taken STA 2023 (Introduction to Statistics).

Communication: E-mail (either to my email address or via canvas messaging) is the best way to reach Dr. Sharp. The summer teaching of this course goes very quickly and as such, you need to be very timely in your emails should issues arise. Any issues that require action **MUST** be handled by email so that there is a written record of need. I will not jump into my zoom meeting room if I see you there without advance notice of a proposed meeting; however, I am able to meet with very little notice during regular business hours (M-F 8-5).

Make sure to enable emails for course announcements and read this syllabus thoroughly! I post important announcements sparingly (no more than 1 per day and usually much less) and will not answer questions by email that are already answered via canvas announcements or the course syllabus.

Course summary: Unlike previous statistics courses you may have taken, this course is very much an APPLIED statistics course. You will be using real-world data relevant to agriculture, natural resources and the

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economy. For some, applied statistics is easier than theoretical statistics; for others, it is incredibly difficult and may take a great deal of time to develop the skills necessary for applied data analysis.

Most real-world problems that are solved using data are not written in a textbook format. Research questions do not always follow intuitive patterns. Nevertheless, as an economist, it is essential that you develop the skills to do applied data analysis while at the same time understanding the theoretical underpinnings of statistical techniques.

This class is a CORE class in the FRE master of agribusiness program. Mastery of the skills taught in this course is a pre-requisite for success in the program. Previous students have found this course to be challenging and time-intensive; however, many of them agree that the rigor introduced in this class is critical in building a strong analytical skillset needed for success in the field of agribusiness.

Expected Student Learning Outcomes: After the successful completion of AEB 5516, a typical student should be able to:

- Identify different types of data and appropriate statistical methods;
- Differentiate between descriptive and inferential statistics;
- Apply statistical techniques to a variety of economic data;
- Analyze a data set using tools provided in excel;
- Interpret statistical output to aid in economic decision making;
- Communicate the results of statistical analysis including writing professional reports;
- Synthesize descriptive and inferential approaches to data analysis through data collection, analysis and the submission of a final report on a topic of interest.

Required Course Materials:

- **Text:** *Essentials of Statistics for Business and Economics*, 7th edition by Anderson, Sweeney, Williams, Camm and Cochran. Cengage Learning, copyright 2010. ISBN: 9781133629658.
- **E-learning:** There is an E-Learning Canvas webpage for this course. E-learning can be accessed via <http://elearning.ufl.edu> using your Gatorlink username and password. If you are having difficulties accessing E-learning, please contact the UF Computing Help Desk by calling (352)-392-HELP or via email helpdes@ufl.edu.
- **Zoom:** There are regular synchronous sessions to be conducted via zoom. To ensure privacy and security, please install the [latest Zoom Client](#), and follow the security recommendations provided on the [Keep Zoom Secure](#) site.
- **InteDashboard:** This class makes use of team based learning software. You will receive information about your login credentials via email on the first day of class. <https://v3.intedashboard.com/>
- **Other:** This course combines statistical concepts with practical application and as such, students are required to have a basic knowledge of rudimentary applications of both. If you feel like you do not have an adequate background in statistics or the use of excel, please use resources such as Kahn Academy (<https://www.khanacademy.org/math/statistics-probability>) or Lynda.com (available from <http://elearning.ufl.edu>) to supplement the classroom materials.

Services for Students with Disabilities The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation

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must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Student counseling and support: If something happens in your personal life that has an impact on your academic life, you must go through the Dean of Students Office (contact below) for additional accommodations. If you are experiencing other forms of distress that do not impact your performance in my class, there are several resources available on campus for students (<http://www.umatter.ufl.edu/>)

Service	Location	Phone
GatorWell Health Promotions Services (works on time management, etc.) (gatorwell.ufsa.ufl.edu)	1 st Floor, Reitz Union	273-4450
Dean of students (http://www.dso.ufl.edu)	P202 Peabody Hall	392-1261
Counseling and wellness center (http://www.counseling.ufl.edu/cwc/)	2190 Radio Road	392-1575
Sexual Assault Recovery Services (SARS)	Infirmery Building	392-1161
Student health care center (http://shcc.ufl.edu)	Infirmery Building	392-1161
University Police Department (police.ufl.edu)		392-1111
Career Resource Center (http://www.crc.ufl.edu)	1 st Floor, Reitz Union	392-1601
UF Help Desk—Technical Support (helpdesk@ufl.edu)	1 st Floor, the HUB	392-4357
Library Support (http://cms.uflib.ufl.edu/ask)	online	
Teaching Center (http://teachingcenter.ufl.edu/)	Broward Hall	392-6420
Writing Studio (http://writing.ufl.edu/writing-studio/)	online	846-1138

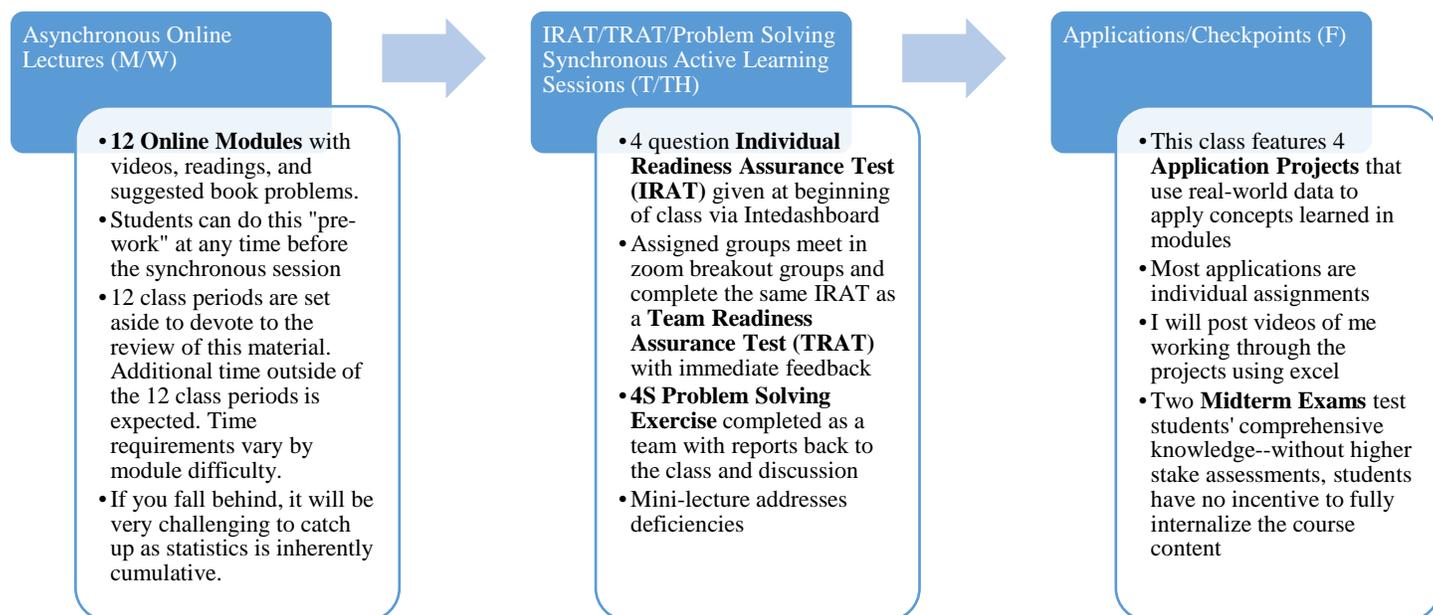
Academic Honesty: As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: “*On my honor, I have neither given nor received unauthorized aid in doing this assignment.*” It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:

<https://sccr.dso.ufl.edu/process/student-conduct-code/>

Attendance and Make-up Work: You must be present for synchronous Team-based learning sessions generally held on Tu/Th and there will be no opportunities to make up missing these class sessions. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

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Class Structure: This is considered a “flipped classroom;” more specifically, this class will be taught using “Team Based Learning-TBL,” a highly effective teaching paradigm that uses carefully designed small groups to facilitate learning and exploration of important course concepts (see the following video: <https://www.youtube.com/watch?v=QudVoyiacuw>). This means that students are expected to learn the course materials using multiple modes including a significant amount of outside of the classroom (asynchronous) effort. In this class, the flow of each module will be as follows:



Course Assignments and Expectations:

Individual Readiness Assurance Test (IRAT) (Best 10 of 12): On the days when the class meets synchronously (Tuesdays and Thursdays—see schedule at the end of this syllabus), there will be an individual quiz. This means that you **MUST** do the assigned readings, watch the assigned lectures and attempt practice problems in the book **PRIOR** to the synchronous class session. This IRAT will include 4 multiple choice questions and should take students between 5 - 10 minutes to complete. You must be on time as extra time will not be given to students who are tardy. Each IRAT will be weighted equally, although some weeks will contain more content and difficulty varies significantly from week to week. The tested material will build on itself although the IRATs will not be *explicitly* cumulative. There are no excuses for missed IRATs as you get to drop 2. It is in your best interest to do all IRATs as it affects your performance **AND** group dynamics.

Team Readiness Assurance Test (TRAT) (Best 10 of 12): These will be the same assessment as the IRAT but they will be completed/discussed as a group. You will be scored based on the group performance on the TRAT. If you do not show up for class, you will receive a zero on your TRAT for that day. There are no excuses for missed TRATs as you get to drop 2 and group work is not possible to redo.

4S Problem Solving Activity (based on peer feedback): In addition to the TRAT there will be a 4S Problem Solving prompt to be completed as a group. This is meant to be an opportunity to apply what you have learned in the module to a real-world significant problem with each team coming to and defending a specific choice under simultaneous report. The grade you earn for this portion will depend on the feedback you provide for your peers as well as the feedback peers provide for you.

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Applications of Data Analysis (4): These application projects require the use of excel to apply statistical methods to a real-world data set. While it is important to learn how to use excel to apply statistical techniques, interpretation of the data and statistical output will be emphasized in these assignments. The final output of these application projects will be a written report which should be typed and thorough. Late submissions will be penalized 5 points per day late (beginning 24 hours after the deadline). All work completed in excel and written in your final report **MUST** be your own.

Midterm exams (2): Each exam will consist of 20 multiple choice questions and will be administered through e-learning. These midterms will be open-book, open-note timed individual assessments (60 minutes) with only one allowable attempt.

Final project: Your final project will require you to collect your own data set and analyze an economic phenomenon of interest to you. This final project should tell a story about food, agriculture and/or natural resources. It will involve use of statistical tools learned throughout the semester including descriptive and inferential statistical analysis.

Composition of Final Score:

Course Assignments	Total Points	% of Total
IRATs (best 10 of 12)	80 points (8 points each)	16%
TRATs (best 10 of 12)	80 points (8 points each)	16%
4S Problem Solving	40 points	8%
Projects (4)	100 points (25 points each)	20%
Midterms (2)	100 points (50 points each)	20%
Final Project	100 points	20%
Total	500 points	100%

Grades and Grade Points: Grades will be assigned as follows

Grade	Percentage	Total Points	Grade Points
A	93% or more	≥ 465	4.00
A-	90.0 – 92.9%	450 – 464	3.67
B+	86.0 – 89.9%	430 – 449	3.33
B	83.0 – 85.9%	416 – 429	3.00
B-	80.0 – 82.9%	400 – 415	2.67
C+	76.0 – 79.9%	380 – 399	2.33
C	73.0 – 75.9%	365 – 379	2.00
C-	70.0 – 72.9%	350 – 364	1.67
D+	66.0 – 69.9%	330 – 349	1.33
D	63.0 – 65.9%	316 – 329	1.00
D-	60.0 – 62.9%	300 – 315	0.67
E	≤ 59.9%	≤ 299	0.00

****Please note that grades are not ‘rounded’ or ‘adjusted’ at the end of the term. The professor has the right to change this point structure at any point so long as it improves the student’s final score.**

Academic Performance:

Your grade on e-learning throughout the semester may not reflect your true performance in the course. You will earn points multiple times per week in this rapid-paced summer semester and it is crucial that you do not

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“check-out” at any point in the semester. If you fall behind, you **MUST** notify me and set up a meeting when you realize this is happening so that we can discuss your best course of action. Do **NOT** wait until the end of the semester as there is nothing I can do to help at that point. It is my goal to teach students and not to “give grades” as I believe grades are earned. As such, consider the following guidelines when you have questions about your grade or class performance:

- If you have any questions about your score at any point, you may set up an appointment to clarify the number of points you have and what points will be required to achieve your desired grade. Grades may not be discussed over email or in front of other students.
- Do **NOT** ask me to change your score on a given assignment unless an egregious error has been made in entering your grade into canvas (i.e. you failed to get credit for a completed assignment or a grade was entered incorrectly).
- Do **NOT** ask for additional points throughout the semester. It may be the case that bonus opportunities to gain additional points will be available; however, this is determined solely by the professor based on an assessment of the relevance of additional activities to course materials and learning objectives.
- Haggling over grades at the end of the semester is **NOT** entertained. Of course, if there is an error in recording a grade, I will gladly give you the correct points. If you believe that any assessment is incorrectly graded or that your grade is incorrectly posted, please contact me via e-mail as soon as possible. As this is an accelerated course, you have 2 days after a grade has been posted to voice your concern. After 2 days have passed, your posted grade will be assumed to be correct and accurate.

Netiquette Policy: As in any class, it is expected that students treat their professors, teaching assistants and fellow students with respect and care. Dr. Sharp has a general policy: treat others as they would want to be treated. Do not assume that something that is funny to you is funny to someone else. In addition, do not assume that something which is clear to you is clear to someone else. In general, conduct yourself according to the advice provided in the UF Netiquette policy: <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf> and in addition, understand that you may be put in a position to speak for your team and any representation of your team or own viewpoints which are inappropriate or disrespectful will be dealt with immediately and may include a reduction in points for the assignment in question.

Summary: Lectures and readings are provided online. The class meets synchronously on Tu/Th to complete IRATs, TRATs and problem solving exercises using team based learning. Projects and midterms are due on Fridays. There will be various checkpoints throughout the semester on your final project which are included in the schedule below.

Note: The instructor reserves the right to change the terms and dates stated in this course syllabus at any time. Any changes will be communicated in class, via Gatorlink e-mail listserv, and posted on e-learning as an announcement. It is solely the student's responsibility to stay informed of any changes.

****By enrolling in this course, you are agreeing to the terms outlined in this syllabus!****

I look forward to a fun and productive semester with you all!

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Schedule:

AEB 5516: Quantitative Methods in Agribusiness					
DOTW	Date	Class #	Topic	Ch.	Synchronous?
Mon	7/6/2020	1	Module 0: Orientation		Yes
Tues	7/7/2020	2	Module 1: Orientation and Data and Statistics	1	Yes
Wed	7/8/2020	3	Module 2: Descriptive Statistics: Tabular and Graphical Approaches	2	No
Thurs	7/9/2020	4	Module 2: Descriptive Statistics: Tabular and Graphical Approaches	2	Yes
Fri	7/10/2020	5	Project 1 + Peer assessment		No
Mon	7/13/2020	6	Module 3: Numerical Descriptive Statistics + Sign up for projects	3	Yes
Tues	7/14/2020	7	Module 3: Numerical Descriptive Statistics	3	Yes
Wed	7/15/2020	8	Module 4: Probability and Probability Distributions	4, 5 & 6	No
Thurs	7/16/2020	9	Module 4: Probability and Probability Distributions	4, 5 & 6	Yes
Fri	7/17/2020	10	Project 2 + peer assessment		No
Mon	7/20/2020	11	Module 5: The Normal and Sampling Distributions + Project Proposal	6 & 7	Yes
Tues	7/21/2020	12	Module 5: The Normal and Sampling Distributions	6 & 7	Yes
Wed	7/22/2020	13	Module 6: Interval Estimation	8	No
Thurs	7/23/2020	14	Module 6: Interval Estimation	8	Yes
Fri	7/24/2020	15	Midterm 1--Modules 1 through 6		No
Mon	7/27/2020	16	Module 7: Hypothesis Testing, part 1 + Final Dataset Due	9	No
Tues	7/28/2020	17	Module 7: Hypothesis Testing, part 1	9	Yes
Wed	7/29/2020	18	Module 8: Hypothesis Testing, part 2	9	No
Thurs	7/30/2020	19	Module 8: Hypothesis Testing, part 2	9	Yes
Fri	7/31/2020	20	Project 3 + Peer assessment		No
Mon	8/3/2020	21	Module 9: Comparison of Means and ANOVA	10	No
Tues	8/4/2020	22	Module 9: Comparison of Means and ANOVA	10	Yes
Wed	8/5/2020	23	Module 10: Simple Linear Regression, part 1	12	No
Thurs	8/6/2020	24	Module 10: Simple Linear Regression, part 1	12	Yes
Fri	8/7/2020	25	Project 4 + Peer assessment		No
Mon	8/10/2020	26	Module 11: Simple Linear Regression, part 2	12	No
Tues	8/11/2020	27	Module 11: Simple Linear Regression, part 2	12	Yes
Wed	8/12/2020	28	Module 12: Multiple Regression + Final project and excel file due	13	Yes
Thurs	8/13/2020	29	Module 12: Multiple Regression	13	Yes
Fri	8/14/2020	30	Midterm 2--Modules 7 through 12		No