

	Department of Statistics Main Office 214 OSB Phone 850-644-3218	INTRODUCTION TO APPLIED STATISTICS STA 2122 sections 0001-0013 SPRING 2022, 3 credit hours FACE-TO-FACE FORMAT Course website: <a href="https://canvas.fsu.edu">https://canvas.fsu.edu</a>
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<p><b>Instructor:</b> Ms. Radha Bose  <b>Email:</b> <a href="mailto:rbose@fsu.edu">rbose@fsu.edu</a>  <b>Office Hours:</b> by appointment only. Please email me if you need to meet me.</p> <p>Teaching Assistants (TAs) names, email addresses and office hours are in the Syllabus module on the course Canvas.</p> <p>Please be aware that all Teaching Assistants (TAs) who have been assigned to work with the instructor of this class will have access to your grades and academic accommodations information.</p> <p><b>All assessments will be online on Canvas.</b>          We will not use Honorlock or any other online proctoring system.</p> <p>Final exam time assigned by the University: Tuesday April 26th at 3:00-5:00pm. <b>We will not have a cumulative final exam</b>, but our final quiz will be given during final exams week, and will be available for a period of time that includes the final exam time assigned by the University.</p>	<p><b>Lectures</b> (section 0001) will meet on Mon &amp; Wed at 12:00-12:50pm in HCB 101.  <b>Recitations</b> (discussion sections 0002-0013) will meet on Fridays. Please check your refreshed class schedule for the specific time and room for your section.  <b>The lectures and recitations will not be recorded for future viewing.</b></p> <p>For both the lectures and the recitations, if no students show up within the first 15 minutes, the rest of the period will be cancelled. In the case of lectures, the next lecture will begin where the cancelled lecture would have left off, and the next assessment will include the material that would have been taught in the cancelled lecture.</p> <p>There will be no Zoom class meetings unless health protocols require it. If there are any Zoom class meetings, they will not be recorded.</p> <p>Students will need to follow the University's current health and safety guidelines when they attend class.</p>
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### Course Description

**Prerequisites:** A grade of "C-" or better in MAC 1105 College Algebra (or equivalent).

**Special Note:** Subsequent credit for STA 5126 is not permitted. No credit given for STA 2122 if a grade of "C-" or better is earned in STA 2171, STA 3032 or QMB 3200.

The course covers Normal distributions, sampling variation, confidence intervals, hypothesis testing, one-way and two-way analysis of variance, correlation, simple and multiple regression, contingency tables and chi-square tests, non-parametric statistics.

The purpose of this course is to prepare students for further study and job preparation in the field of Natural Sciences. It will emphasize understanding of data and interpretation of statistical analyses. It will require students to think of data, and report the results of their analyses, in context.

**Learning Objectives**

This course has been approved to meet FSU's Liberal Studies **Quantitative and Logical Thinking** requirements and helps you become a critical analyst of quantitative and logical claims.

In order to fulfill the State of Florida's College mathematics and computation requirement the student must earn a "C-" or better in the course.

By the end of this course, students will demonstrate the ability to:

1. Select and apply appropriate methods (i.e., mathematical, statistical, logical, and/or computational models or principles) to solve real-world problems.

2. Use a variety of forms to represent problems and their solutions.

The above two competencies will be assessed in the Liberal Studies Quantitative Assessment for STA 2122, which includes a written summary of results.

3. Use descriptive statistics and graphical methods to summarize data accurately.

4. Use inferential statistics to make valid judgments based on the data available.

5. Select the appropriate statistical tools to analyze a particular problem.

6. Describe the goals of various statistical methodologies conceptually.

7. Develop a healthy skepticism toward statistical studies and their results based on a sensible consideration of the techniques employed.

**Required Materials**

- A personal computer, reliable internet connection, and Chrome or Firefox browser.

- A TI-84 Plus or equivalent calculator. We will teach you how to use a TI-84 series calculator, but we cannot promise to be able to help with any other type of calculator.

A textbook is not required for this class. The instructor will provide all required course notes and exercises. Please note that the materials provided by the instructor were put together for your individual use only. While you may share these materials with classmates, we ask that you do not share them with third parties who are not enrolled in this class. If you seek help outside of class, you may, of course, allow your helper to see the materials, but please do not allow them to make copies or in any other way take our material. We appreciate your co-operation in protecting our material. Thank you!

**Additional Resource**

The following free online textbook is an additional resource that you might find useful: Introductory Statistics from OpenStax, Print ISBN 1938168208, Digital ISBN 1947172050, [www.openstax.org/details/introductory-statistics](http://www.openstax.org/details/introductory-statistics).

**Lecture videos and/or other recordings provided by the instructor**

Please note that the recorded lectures and/or other recordings are the property of Florida State University and are being made available only to the students enrolled in this class. Students are not permitted to share the recorded lectures or other recordings with any person or entity outside of this class. Copyrights of the recorded lectures and other recordings are reserved by the instructor and Florida State University.

**Note on Technology-dependent Assessments**

This course is technology-dependent. While we will do our best to work with you on technology issues, please be aware that if you take an assessment but we can find absolutely no record of the fact, then we will not be able to give you credit for it. Please do not use Safari when you take assessments on Canvas, please use Chrome or Firefox.

**Assessments & Grades**

Assessments – all are online on Canvas	Weight
<b>Open Quizzes (OQ):</b> <ul style="list-style-type: none"> <li>- collaboration is allowed and unlimited attempts are allowed for each quiz</li> <li>- the One-way Anova open quiz, the SLR Inference open quiz and the Chi-Square Tests open quiz cannot be dropped</li> <li>- of the other open quizzes, the lowest two percentage grades will be dropped</li> <li>- OQs will be posted as we go, and all except the final OQ will be due on the last day of classes, the final OQ will be due during final exams week</li> <li>- <b>extensions are not allowed for the open quizzes</b></li> </ul>	25%
<b>Liberal Studies Quantitative Assessment (LSQA):</b> <ul style="list-style-type: none"> <li>- collaboration and internet sources (except the course Canvas) are not permitted</li> <li>- two timed attempts are allowed</li> <li>- cannot be dropped</li> <li>- the LSQA will be available from Thursday 12:01am until Sunday 11:59pm after the relevant chapter has been completed in lecture</li> </ul>	10%
<b>Timed Quizzes (TQ):</b> <ul style="list-style-type: none"> <li>- collaboration and internet sources (except the course Canvas) are not permitted</li> <li>- two timed attempts are allowed for each quiz</li> <li>- the One-way Anova timed quiz, the SLR Inference timed quiz and the Chi-Square Tests timed quiz cannot be dropped</li> <li>- of the other timed quizzes, the lowest two percentage grades will be dropped</li> <li>- each TQ (not including the final TQ) will be available from Thursday 12:01am until Sunday 11:59pm after the relevant chapter has been completed in lecture</li> <li>- the final TQ will be available for a few days starting the day after the last day of classes</li> </ul>	65%
<b>Total</b>	<b>100%</b>

~ During assessments you are permitted to use any and all materials obtained from the course Canvas, including lecture videos, calculator videos, notes, exercises, etc.

~ Assessments that are not submitted will receive a grade of zero. When a makeup is submitted, the zero will be replaced with the earned grade.

~ If you believe that the grade you received on an assessment is incorrect, please email your TA about it within 48 hours after the grade has been made available to you. If no issues are raised during that 48-hour time frame, then it will be assumed that the grade is accepted and subsequent requests for a grade review may not be granted.

~ If you request a quiz extension, please check your email every 12 hours until you receive a response saying that the extension was granted/denied.

~ An extension on a specific quiz will NOT be granted if you have three or more prior outstanding quizzes. For example, if you request an extension on Quiz 10 but you did not submit Quizzes 3, 5 & 8, then you will be denied an extension on Quiz 10.

~ If multiple quiz extensions are required due to exceptional circumstances, then only three extensions will be granted at a time, and the extensions will follow the ordering of the quizzes. After you submit one of the extended quizzes, you will email your TA and ask them to reopen the next one. Please note that it may take a day or two for your TA to reopen a quiz after you email them, so you should send your email in a timely manner and check your email every 12 hours for a response.

~ The last day of classes is the ultimate deadline for all quiz extensions except the final quiz.

~ After the last day of classes, there will be no make-ups, no extra credit assignments, and in general, no opportunities for grade improvement, so please do your best during the term.

~ After the final quiz is over, the class will be absolutely and completely over. In particular, this means that all assessments will be completely over and absolutely no extensions will be granted.

~ Please ignore the grade totals or averages that you may see on the course website; they are not correct and unfortunately it is not possible to disable them. In this class, we only store and display individual assessment grades on the course website, we do not do grade calculations there.

~ All grades will be recorded as percentages, and these percentages (not points) will be used in your overall course grade calculation:  $(OQ \text{ Average} * 0.25) + (LSQA * 0.1) + (TQ \text{ Average} * 0.65)$ .

~ Your letter grade will be selected from the table below after rounding the overall numerical course grade UP to the next higher whole number.

%	Letter	%	Letter	%	Letter	%	Letter	%	Letter
≤59	F	67–69	D+	77–79	C+	87–89	B+	FSU does not award A+	
		63–66	D	73–76	C	83–86	B	≥93	A
		60–62	D-	70–72	C-	80–82	B-	90–92	A-

### Receiving a grade of “Incomplete”

A request for a grade of “Incomplete” will

~ NOT be granted if you have completed the coursework, including the assessments that cannot be dropped and excluding the drops and allowable absences.

~ be granted only if both of the following conditions are satisfied:

- (1) the only assessment that you have yet to take is the final assessment, and
- (2) your overall average excluding the final assessment is a passing grade (70% or above).

**Final Exam Rescheduling Policy**

***You may not take the final exam before final exams week.*** Individual students who need to reschedule the final exam for a different time during final exams week should talk to me about it first to get my approval and then fill out and follow the instructions on the “Request to Reschedule a Final Examination” form at [https://artsandsciences.fsu.edu/sites/g/files/upcbnu321/files/2022-01/Request to Reschedule 01032022.pdf](https://artsandsciences.fsu.edu/sites/g/files/upcbnu321/files/2022-01/Request_to_Reschedule_01032022.pdf).

The form needs to be submitted to the College of Arts and Sciences before 5pm on the last day of classes.

If you experience a documented emergency that prevents you from observing the above deadline, contact me as soon as you are able to, and we'll take it from there.

**How to aim for success in this class**

For each topic/module:

- ~ during the lectures, pay attention and follow along using the filled-in notes, ask questions,
- ~ after the lectures, study thoroughly the information and examples in the filled-in notes,
- ~ then attempt the relevant Open Quiz,
- ~ do all of the try-on-your-own exercises in the notes,
- ~ do all of the extra exercises posted with the notes,
- ~ study the solutions even if you get the answers right because the solutions can provide insights to the problems,
- ~ make sure you know how to use your calculator appropriately,
- ~ then go back and finish up the relevant Open Quiz,
- ~ then take the relevant Timed Quiz.

Remember that, in addition to emailing us or coming to office hours, you can discuss the material, ask questions and get help in the Friday recitations.

**Email & Communication**

- ~ Please turn on the course notifications on Canvas by going to Account/Notifications and selecting the *Notify immediately* option for all of the items under Course Activities.
- ~ We will communicate with you outside of class by sending emails to your [@my.fsu.edu](mailto:@my.fsu.edu) account, sending messages to your Canvas Inbox, and posting announcements on the course Canvas. Please check your FSU email, your Canvas Inbox, and the course announcements on Canvas every day.
- ~ If you email us, please send from your [@my.fsu.edu](mailto:@my.fsu.edu) account.
- ~ Please send assessment-related enquiries least 24 hours before the assessment is due.
- ~ Always include your name and your TA's name when you email us. If we need to know this information in order to answer your query and you have not provided it, you may not get a response.
- ~ You may expect a response to your email within two work days in Fall/Spring, or one work day in Summer. But if you email us with an enquiry that was previously addressed in the syllabus, in a class email or in a course announcement, you may not get a response.

**Attendance, Absence and Drop/Withdrawal**

~ Drop and Withdrawal deadlines are given in the University's academic calendar at

<https://registrar.fsu.edu/calendar/>.

~ First-day attendance will be taken electronically on the course website. Apart from that, attendance will not be taken, but you will be expected to attend class every day so that you can benefit from the live explanations given by the instructor.

~ You are expected to adhere to all assessment deadlines.

~ Lack of future planning, or mismanagement of time and other resources, are not acceptable reasons for missing assessment deadlines.

~ Bear in mind that the opportunities presented in this class are made equally available to all students in the class and it is up to each individual to make the most of these opportunities.

~ In the interests of fairness, we will not do for one student what we cannot do for all students who are likely to request the same.

~ Documentation for missing assessment deadlines, if requested, will not be accepted after the last day of classes.

~ Please always discuss your missed assessment deadlines with us regardless of the reasons you missed the deadlines. We will do our best to work with you while maintaining fairness to the other students in the class.

**University Attendance Policy**

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

**Academic Honor Policy**

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy>)

**Academic Success**

Your academic success is a top priority for Florida State University. University resources to help you succeed include tutoring centers, computer labs, counseling and health services, and services for designated groups, such as veterans and students with disabilities. The following information is not exhaustive, so please check with your advisor or the Department of Student Support and Transitions to learn more.

### Confidential Campus Resources

Various centers and programs are available to assist students with navigating stressors that might impact academic success. These include the following:

<p>Victim Advocate Program University Center A, Rm. 4100 (850) 644-7161 Available 24/7/365 Office Hours: M-F 8-5 <a href="https://dsst.fsu.edu/vap">https://dsst.fsu.edu/vap</a></p>	<p>Counseling and Psychological Services Askew Student Life Center, 2nd floor 942 Learning Way (850) 644-8255 <a href="https://counseling.fsu.edu/">https://counseling.fsu.edu/</a></p>	<p>University Health Services Health and Wellness Center (850) 644-6230 <a href="https://uhs.fsu.edu/">https://uhs.fsu.edu/</a></p>
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### Sexual Misconduct and Title IX Reporting

As an instructor, I am obliged to report all instances of sexual misconduct that I become aware of to the University's Title IX Director; I cannot hold such information confidential. If you would like to discuss your situation in confidence, you may contact the Victim Advocate Program (<https://dos.fsu.edu/vap/>), Counseling & Psychological Services (<https://counseling.fsu.edu/>), the Employee Assistance Program (<https://eap.fsu.edu/>), University Health Services (<https://uhs.fsu.edu/>), or pastoral counselors.

### Americans with Disabilities Act

Florida State University (FSU) values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. FSU is committed to providing reasonable accommodations for all persons with disabilities in a manner that is consistent with academic standards of the course while empowering the student to meet integral requirements of the course.

To receive academic accommodations, a student:

- (1) must register with and provide documentation to the Office of Accessibility Services (OAS);
- (2) must provide a letter from OAS to the instructor indicating the need for accommodation and what type; and,
- (3) should communicate with the instructor, as needed, to discuss recommended accommodations. A request for a meeting may be initiated by the student or the instructor.

Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from the Office of Accessibility Services has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the Office of Accessibility Services

874 Traditions Way

108 Student Services Building

Florida State University

Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

[oas@fsu.edu](mailto:oas@fsu.edu)

<https://dsst.fsu.edu/oas>

Academic accommodations will be provided as soon as possible after verification is received. Academic accommodations are not retroactive, so they will not apply to lectures/lessons and assessments that took place before verification was received.

### **Public Health Protocols**

In our classroom, I will expect everyone to wear a proper, well-fitting mask. As our President has informed the university community, FSU expects everyone on campus to use face-coverings. In regions where virus rates are high, the CDC recommends that even vaccinated individuals wear masks in public indoor spaces, like classrooms, especially where social distancing is not possible. Florida infection and hospitalization rates are greater now than they were at the height of the 2020 surge due to the Delta variant, a more infectious and easily transmissible version of the COVID-19 virus. The best way to protect against serious illness is to be fully vaccinated, but not everyone among us can be. Because the Delta variant can infect even vaccinated individuals and can be spread by them to others, it poses a special threat to members of the community with underlying health conditions and children at home who are too young for vaccination.

For these reasons, FSU expects each member of the community to comply with the public health protocols our President set forth on August 9, 2021, including (1) wearing masks in public indoor spaces, (2) getting fully vaccinated, (3) being tested for the virus if you have symptoms, and (4) staying home and away from others if you are sick. Please remember that you should NOT attend class in person if you have tested positive for COVID-19 or are quarantining after exposure. Finally, please bear in mind that the COVID-19 situation is fast-moving, and that university guidance on the issue may change at any time.

### **Classes Subject to HB233 Recording**

In this class, consistent with state law and university policy, students are permitted to make recordings of class lectures for personal use only. As noted, sharing, posting, or publishing classroom recordings may subject you to honor code violations and legal penalties associated with theft of intellectual property and violations of other state law. Moreover, students and educators have expressed concern that recording classroom activities may negatively impact the learning experience for others, especially in classes that involve questions, discussion, or participation. To protect a learning environment in which everyone feels free to experiment with ideas, we ask you refrain from recording in ways that could make others feel reluctant to ask questions, explore new ideas, or otherwise participate in class. Students must monitor their recording so that they do not include participation by other students without permission. Students with disabilities will continue to have appropriate accommodations for recordings as established by the Office of Accessibility Services.

### **Syllabus Change Policy**

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.