



LIBERAL STUDIES QUANTITATIVE AND LOGICAL THINKING
 DEPARTMENT OF STATISTICS
 STA 2122 INTRODUCTION TO APPLIED STATISTICS
 SYLLABUS FALL 2016 SECTIONS 01–12
 3 SEM HRS CREDIT

<p>Instructor: Ms. Radha Bose Email: bose@stat.fsu.edu Office Location: Rm 210C OSB Office Hours: <u>Every week, I will announce my office hours for the next week on Blackboard and via email.</u> If you cannot make my announced hours, I will try to meet you at a different time, please email me to set up an appointment.</p>	<p>Classes meet Aug 29th to Dec 9th MON & WED 11:15am–12:05pm HCB0101 FRIDAY RECITATIONS: see last page FINAL EXAM: WED Dec 14th 10:00am-12:00pm, location TBA Blackboard Course Websites: https://campus.fsu.edu/webapps/login Please read our Class Log and check for announcements on Blackboard every day.</p>
<p>The following documents located on Blackboard at STA 2122 F16 DOCUMENTS / Course Materials / Syllabus folder are part of this syllabus, please be sure to read them too: Make-up Policies, Religious Holiday Sample Letter, Tentative Pacing Schedule, Expectations.</p>	

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.

- ~ The syllabus is intended to be an agreement between you (student) and us (instructor + TAs).
- ~ The presence of your name on your section roster after drop/add ends indicates that you have read and understood all of the information and documents posted on Blackboard at STA 2122 F16 DOCUMENTS / Course Materials / Syllabus folder, you have had your questions about them answered, and you accept and will abide by our policies.
- ~ Please understand that we deal with hundreds of students each term, and 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.
- ~ 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 best of them.

LIBERAL STUDIES FOR THE 21st CENTURY:**Quantitative and Logical Thinking**

The *Liberal Studies for the 21st Century Program* at Florida State University builds an educational foundation that will enable FSU graduates to thrive both intellectually and materially and to support themselves, their families, and their communities through a broad and critical engagement with the world in which they live and work. Liberal Studies thus offers a transformative experience. This course has been approved as meeting the Liberal Studies requirements for Quantitative and Logical Thinking and thus is designed to help you become a **critical analyzer 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.

COURSE DESCRIPTION

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

Special Note: 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.

COURSE OBJECTIVES

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

- (1) Analyze and address problems drawn from real world scenarios by applying appropriate mathematical, statistical, logical, and/or computational models or principles.
- (2) Interpret and evaluate data and information as presented in a variety of modes (such as tables, graphs, and charts), using appropriate technology. They will also be able to clearly communicate a summary of their findings to peers.

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 textbook is not required for this class, however, you will need to read each set of class notes carefully after we cover them in lecture and before the quiz that follows.

Class notes: You will need to print out class notes from our Blackboard STA 2122 F16 DOCUMENTS website and bring them to class on a regular basis, so please budget some money for printing. The current estimate of your printing costs for the entire term is \$80.00 (about 400 pages @ 20 cents/page).

Writing materials: Notepaper and sharpened pencils.

Calculator: TI-84 Plus or equivalent.

ATTENDANCE, ABSENCE AND DROP/WITHDRAWAL

~ We fully expect to see you at every class meeting. First-day attendance will be taken electronically via Blackboard, however we still expect to see you in class on the first day.

~ Drop and Withdrawal deadlines are given in the University's academic calendar at http://registrar.fsu.edu/registration_guide/fall/academic_calendar/.

~ If you miss class, we expect you to keep up-to-date with the lessons, activities and announcements by getting in touch with a classmate or with us, **and** by reading the Class Log on our STA 2122 F16 DOCUMENTS course site on Blackboard.

~ If you miss lecture, you may get the notes from your recitation TA or Radha. We will let you copy down notes two times only, so do not make a habit of missing class. We will not re-teach entire lessons, but after you have studied the material that you copied down and attempted the relevant exercises, we will help you with specific questions you may have.

~ **If you miss a Friday recitation**, see the Make-up Policies **and** email your recitation TA by the following Monday.

~ **If you miss the final exam**, *immediately* email Radha or otherwise get a message to her and we'll take it from there.

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.

EMAIL & COMMUNICATION

- ~ please check the Class Log on our STA 2122 F16 DOCUMENTS course site on Blackboard every day to keep up with what's happening in class
- ~ please check your [@my.fsu.edu](mailto:my.fsu.edu) email every day for emails from us
- ~ if you email us, please send from your [@my.fsu.edu](mailto:my.fsu.edu) account
- ~ always **include your name and your recitation TA's name** when you send email to Radha, 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
- ~ send assessment-related questions at least 24 hours before the assessment is due to begin
- ~ be aware that email sent from outside the FSU domain may not get through to us, so if you send an email and you don't get a response within two working days, please try to meet us in person before class or after class or during office hours
- ~ in general, if you email us and you don't get a response within two working days, and if you are still attending classes are not confined off-campus, please talk to us in person before class or after class or during office hours

ASSESSMENT AND GRADING

WE WILL ALLOW ABSOLUTELY NO MAKE-UPS, NO EXTRA CREDIT ASSIGNMENTS, AND IN GENERAL, NO OPPORTUNITIES FOR GRADE IMPROVEMENT, AFTER THE LAST DAY OF CLASS, SO PLEASE DO YOUR BEST DURING THE TERM.

We reserve the right to impose a penalty on your assessment grade if you violate any of the guidelines below.

Guidelines	Activities (20%)	Quizzes (50% or 30%)	Cumulative Final Exam (30% or 50%)
Signing in	YOU WILL BE ASKED TO SIGN IN AT EVERY ACTIVITY, EVERY QUIZ AND THE FINAL EXAM. PLEASE MAKE SURE YOU SIGN THE ROSTER BEFORE YOU LEAVE THE CLASSROOM!		
Type of work	Group	Individual	
Time allowed	45 mins	45 mins: please come to class 5 mins early, we will begin giving out quiz papers 5 mins before the period starts	2 hours
Communication in class	is permitted and encouraged	is not permitted	
Communication with persons	is not advised	is not permitted	

outside of the classroom			
<p>During quizzes and the final exam, if we believe that you or persons sitting near to you are engaging in academic dishonesty or have previously engaged in academic dishonesty, we will ask you to move to a different seat. This will be a subjective judgment on our part. In such situations you should move to the indicated seat as quickly and as quietly as possible in order to keep distraction to a minimum during testing.</p>			
Number of times you may take the assessment	one		
Materials that you need to bring	the filled-in class notes and worked exercises	calculator, notesheet*, scratch paper and a watch to keep track of time You may not share your calculator.	
<p>* at each quiz you may use ONE self-planned self-handwritten two-sided 8½"x11" sheet of notes * at the final exam you may use TWO self-planned self-handwritten two-sided 8½"x11" sheets of notes</p> <p>Please do not bring typed up sheets, electronically copy-pasted collages or hard-paper cut-and-pasted collages. Please do not bring cheat sheets provided by a tutor or tutoring agency, or any other person or organization.</p>			
Materials that are <u>not</u> permitted	nothing	course materials such as class notes, exercises, etc; cell phones and other remote communication devices You may not use a cell phone as a calculator.	
Earned grade	<p>For <u>each activity</u> you will earn one of the three grades below.</p> <p>Absent — 0% Present — 50% Present and Participating — 100%</p> <p><i>Coming to class more than 15 mins late, or leaving class more than 15 mins early without completing the assigned work, counts as lack of participation, so you</i></p>	<p>Graded question by question. Graded papers will not be returned to you. Visit your recitation TA's office hours if you wish to see your paper.</p>	<p>Graded question by question. Graded papers will not be returned to you. Contact Radha if you wish to see your paper.</p>

	<i>will receive 50% if you do so.</i>		
<p>If you are present for an activity but fail to sign in your attendance, you will get a zero grade. Since we deal with large numbers of students, it will be difficult for us to recall if you were present or not, so please do not ask us to give you credit for an activity if you failed to sign in. Please note that possession of an activity paper will not serve as proof that you were present because we freely give out the activity papers and we do not keep track of them.</p>			
Type of questions	Questions that require you to perform an activity which will aid your understanding of certain statistical concepts. Activities may be cumulative in nature.	All quizzes and the final exam will include question types that were <u>not</u> previously presented in the class notes or exercises, but these question types will cover material that was definitely previously presented. This means that you should aim to learn the concepts and not just learn how to answer particular types of questions. Quiz questions may be cumulative, so you need to be up-to-date with all the material covered up to that point. The final exam will be cumulative.	
How to answer the questions	Follow the instructions provided with the activity. Ask your recitation TA for clarifications or help if necessary.	<p>For each question, follow the instructions provided and, unless otherwise stated,</p> <ul style="list-style-type: none"> ~ show detailed work to receive credit, ~ write your answers in the context of the "story" wherever applicable, ~ algebra, computation, logic, correct application of appropriate statistical formulas and methods, and answers given in context will be graded, not just final numerical answers. <p>You may not ask your recitation TA, or anyone else, for help.</p>	
<p>At each quiz, you will be given a quiz paper only if your name is on the section roster and you will be asked to sign the roster. This means that you MUST attend the section in which you are enrolled. If you attend a different section then you will not be given a quiz paper.</p>			

Test Question Security

The following pledge will be printed on every quiz and on the final exam (wording may vary slightly). We regret to say that if you do not sign the pledge, we will not grade your paper and your grade will be zero. Please bear in mind that occurrences such as quiz or final exam question disclosures reduce the worth of the degree that you are working toward.

I pledge that I will never disclose the questions herein to anyone, and I will not discuss them with anyone other than my course instructor or my recitation TA. I understand that if I break this pledge at any time, the grade that I earn on this paper will be reduced to zero and my overall numerical course grade will be calculated, or re-calculated, accordingly, and my course letter grade will be demoted if necessary.

Missing Grades

- ~ be sure to attend the recitation section in which you are enrolled to avoid missing grade issues
- ~ check your grade on Blackboard at STA 2122 F16 GRADES every week to make sure your latest grade has been posted, please do this even if you already know your grade
- ~ if a grade is not posted, **alert your recitation TA immediately via email**, it is important that you alert us via email so that there will be a record of the fact that you reported the matter
- ~ if you report a missing grade within two weeks after the assessment took place, we will do our best to locate your missing grade
- ~ if you report a missing grade more than two weeks after the assessment took place, we will not be able to help you and the missing grade will have to remain as a zero grade

Overall Course Grade

We do not do our grade calculations in Blackboard at all, we only use the Blackboard grade center to store and display grades. Please ignore the grade totals or averages that you may see there.

All grades will be recorded as percentages, and these percentages (not points) will be used in your overall course grade calculation as follows:

- (i) calculate the average of your Activity percentages, this is your Activity Average,
- (ii) calculate the average of your Quiz percentages (omit the lowest one), this is your Quiz Average,
- (iii) overall numerical course grade = $(0.2 * \text{Activity Average}) + (0.5 * \text{the higher of your Quiz Average and your Final Exam}) + (0.3 * \text{the lower of your Quiz Average and your Final Exam})$,
- (iv) round your overall course grade UP to the next higher whole number before matching it to a letter grade.

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

Grading Appeals

During the course of the term, if you believe that a paper was improperly graded by your recitation TA, go to their office hours to see your paper and discuss it with them. If the matter is not resolved after that discussion, then email me (Radha) and ask me to re-grade your paper – I must receive your email within two weeks after grades for that paper are posted on Blackboard.

Receiving a grade of “Incomplete”

A request for a grade of “Incomplete” will

~ NOT be granted if you have completed *all* of the coursework, including the final exam.

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

- (1) you have completed all of the quizzes and activities, and
- (2) your overall average excluding the final exam is a passing grade.

STUDENTS SWITCHING SECTIONS

When you switch sections, your grades are permanently deleted from your old Blackboard section website. Always inform us before you switch so that we may keep a copy of your previously earned grades.

AUDITING

If you are auditing this course you will need to show me your approved audit registration form. After I see your form, I will add you to the course site on Blackboard.

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/Academics/Academic-Honor-Policy>.)

AMERICANS WITH DISABILITIES

Students with disabilities needing academic accommodation should:

- (1) register with and provide documentation to the Student Disability Resource Center; and
- (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

We will begin providing special accommodations as soon as possible after I get your letter. You must take your quizzes and final exam at the SDRC testing center, on the same day as the other students take them in class. If you need to take a quiz or the final exam on a different day, please talk to me (Radha) about it first. Please do not schedule a quiz or the final exam for a different day without first clearing it with me (Radha). If you choose to take a quiz or the final exam in the regular classroom or at some other location, you forfeit your special accommodations and you must comply with the rules that the other students follow. In particular, we will not be able to allow you extra time in the regular classroom. You may choose to complete the activities in class or at the SDRC testing center. Please note that some activities are designed to be group efforts, so you may not fully grasp the learning objectives if you do them on your own. In my experience, however, students with disabilities have always elected to complete the activities in class and have not had significant problems doing so. Classmates are generally co-operative and helpful. 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:

Student Disability Resource Center

874 Traditions Way, 108 Student Services Building
Florida State University, Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
<http://www.disabilitycenter.fsu.edu/>

FRIDAY RECITATIONS

Section	Start	End	Room	TA
STA 2122/0007	8:00 AM	8:50 AM	HCB 0210	Qiusheng Chen
STA 2122/0002	9:05 AM	9:55 AM	OSB 0108	Wright Shamp
STA 2122/0006	9:05 AM	9:55 AM	HCB 0210	Qiusheng Chen
STA 2122/0012	9:05 AM	9:55 AM	HCB 0309	Jiahui Shen
STA 2122/0004	12:20 PM	1:10 PM	HCB 0207	Qiusheng Chen
STA 2122/0008	12:20 PM	1:10 PM	OSB 0108	Disa Yu
STA 2122/0009	1:25 PM	2:15 PM	HCB 0214	Jiahui Shen
STA 2122/0001	2:30 PM	3:20 PM	OSB 0108	Disa Yu
STA 2122/0010	2:30 PM	3:20 PM	HCB 0210	Wright Shamp
STA 2122/0003	3:35 PM	4:25 PM	OSB 0108	Disa Yu
STA 2122/0005	3:35 PM	4:25 PM	OSB 0110	Jiahui Shen
STA 2122/0011	3:35 PM	4:25 PM	HCB 0214	Wright Shamp