DEPARTMENT OF STATISTICS  
STA 2122 INTRODUCTION TO APPLIED STATISTICS  
SECTIONS 01-06 SYLLABUS SPRING 2011  
3 SEM HRS CREDIT

Instructor: Ms. Radha Bose  
Office: 210C OSB  
Email: bose@stat.fsu.edu  
Office Hour: By appointment. Send email to make appointment.  
TA Office Hours & Email: See your Blackboard section website.  
Class Meeting Times and Locations: See Lecture and Recitation Schedule (LRS).  
Course Outline: See Tentative Pacing Schedule (TPS)  
Blackboard Websites:  
http://campus.fsu.edu/webapps/login/Blackboard_Blackboard60/logincas.jsp?service=https%3A%2F%2Fcampus.fsu.edu%2Fwebapps%2Flogin

Please note that all the materials posted in Course Library on our Blackboard Main Website 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 our class. When you seek help outside of class, you may of course allow your helper to see the material, but please do not allow them to make copies or in any other way take our material for their own business use. We appreciate your co-operation in protecting our material.

~ The policies outlined in this syllabus are subject to minor changes 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 the first week of class indicates that you have read and understood the entire syllabus including the LRS and the TPS, you have had your questions about it answered, and you accept and will abide by its policies.  
~ We do not want to have to make value judgments on excuses presented so we will never ask you for an explanation/documentation of your absence. All we ask is that you accept and abide by our policies.  
~ Please do not ask for policy exceptions to be made in your case at any time during the term. Making an exception for you would amount to breaking the agreement and it would be unfair to your classmates.  
~ Please understand that we deal with hundreds of students each semester, 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.

PREREQUISITES AND CREDIT  
A grade of C− or better in MAC 1105 College Algebra or its equivalent.  
* Only 2 sem hrs credit given if C− or better previously earned in STA 2023.  
* No credit given if C− or better previously earned in STA 2171, STA 3032 or QMB 3200.

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PURPOSE AND CONTENT OF THE COURSE
The purpose of this course is to prepare students for further study and job preparation in the field of Natural Sciences. The course content includes basic descriptive statistics, linear correlation and regression, sampling, random variables, discrete probability, Normal distributions, sampling distributions and the Central Limit Theorem, sample size calculations, parameter estimation including confidence intervals, hypothesis testing, one-sample and two-sample statistical inference, chi-square tests, one-way ANOVA and regression inference. Some of these topics may be omitted, or other topics included, depending on class progress and other circumstances.

COURSE GOALS
Upon successful completion of this course a student will be able to: (1) Describe the goals of various statistical methodologies conceptually. (2) Apply statistical techniques in the context of everyday life and further studies in their discipline. (3) Understand different sampling strategies. (4) Use descriptive statistics and graphical methods to summarize data accurately. (5) Use inferential statistics to make valid judgments based on the data available. (6) Select the appropriate course tools to analyze a particular problem. (7) Develop a healthy skepticism toward statistical studies and their results based on a sensible consideration of the techniques employed.

ATTENDANCE AND DROP/WITHDRAWAL
First day attendance is mandatory per university regulations. Thereafter attendance will not be taken, however, we do expect you to be present at every class meeting. Drop/Withdrawal deadlines are given in the University's academic calendar at http://registrar.fsu.edu/dir_class/spring/acad_cal.htm.

ABSENCES
The nature of our policies is such that you will never need permission to be absent and we will never require documentation from you if you are absent. If you miss class, we expect you to keep up-to-date with the lessons and announcements by getting in touch with a classmate or with us. Regarding the lessons, after you have studied the material that you missed, we will help you with specific questions you may have. The Tentative Pacing Schedule will give you an idea of what you will miss if you are absent. Missed Assessments — see p.3-4.

CLASS CANCELLATIONS
If we ever need to cancel class, we will email you or post an announcement on our Blackboard Main Website or on your Blackboard section website, so please check your email and both Blackboard websites every day for the latest information. If the University closes due to bad weather, or any other reason, then class is automatically cancelled, so please check the University alerts webpage http://alerts.fsu.edu/ at such times.

EMAIL
~ please check your fsu.edu email every day
~ always include your full name, course code and section number when you send email — 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
REQUIRED MATERIALS

**Class notes:** You will need to print out class notes from our Blackboard Main 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:** Any simple scientific calculator.

HELP OUTSIDE OF CLASS

1. Myself — you may ask me questions by email or you may visit my office hours.
2. Your TA — you may ask questions by email or you may visit their office hours.
3. Your classmates — talk to your classmates outside of class and see if they can help you.
4. Tutor — you may hire a tutor for an hourly fee. The Statistics department has a list of Statistics graduate students who tutor, you may email anyone on that list to engage their services.
5. The Statistics helpdesk at Strozier Library — a free help service offered by the Statistics Department. It is staffed by Statistics graduate students who will do their best to help you sort out your difficulties.

The tutor list and helpdesk schedule are available at [http://stat.fsu.edu/academics.php](http://stat.fsu.edu/academics.php). Whenever you seek help outside of class, please bring your organized course materials, writing paper, pencils and calculator with you and have your questions along with relevant page numbers written down so that you can get the most out of the help session. **During office hours and helpdesk hours we will not re-teach large portions of material that you may have missed. Office hours and helpdesk hours are intended to provide assistance with specific items that you may still be having trouble with after you have read the relevant material and attempted the problems on your own.**

ASSESSMENT AND GRADING

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<th>Guidelines</th>
<th>Type of Assessment</th>
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<td>Activities</td>
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<tr>
<td>Percentage of course grade</td>
<td>30% (4 @ 7.5% each)</td>
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<tr>
<td>Type of work</td>
<td>Group</td>
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<tr>
<td>Time and location</td>
<td>in Friday recitations</td>
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<td>Time allowed</td>
<td>45 mins</td>
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<tr>
<td>Communication in class</td>
<td>is permitted and encouraged</td>
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<tr>
<td>Number of times you may take the assessment</td>
<td>one</td>
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<tr>
<td>Make-ups</td>
<td>none</td>
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<tr>
<td>Materials that you need to bring</td>
<td>anything and every thing</td>
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</tbody>
</table>
| Materials that are not permitted | nothing | cell phones and other remote communication devices  
*you may not use a cell phone as a calculator* | cell phones and other remote communication devices  
*you may not use a cell phone as a calculator* |
|----------------------------------|---------|-------------------------------------------------|-------------------------------------------------|
| Earned grade                     | For each activity you will earn one of the three grades below.  
Absent — 0%  
Present — 50%  
Present and Participating — 100% | Graded question by question. Graded papers will not be returned to you. Contact your TA if you wish to see your paper. | Graded question by question. Graded papers will not be returned to you. Contact Radha if you wish to see your paper. |
| Type of questions                | Questions that require you to perform an activity which will aid your understanding of certain statistical concepts. | All quizzes and the final exam will include question types that were not previously presented in this class, but these question types will cover material that was definitely previously presented. This means that you should aim to learn the concepts and not 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 TA for clarifications or help if necessary. | For each question, unless otherwise stated,  
~ 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 answers.  
**You may not ask your TA, or anyone else, for clarifications or help.** |

To allow for circumstances beyond your control (see below), we will offer seven quizzes and six activities, but you only need to take five quizzes and participate in four activities. **We strongly suggest that you save the extra two quizzes and the extra two activities for times when you have a genuine emergency and you absolutely cannot make it to class.** If you take more than five quizzes or participate in more than four activities, we will only count your highest five quiz grades and highest four activity grades.
Circumstances beyond your control include but are not limited to: late addition to the class, medical illnesses, deaths in the family, family emergencies, weddings, childcare issues, victimization, other law enforcement issues, court dates, religious days, extracurricular activities, work schedules, inclement weather, public transportation problems, vehicle breakdowns, parking and other vehicle-related issues.

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 (even after the fact disclosures) reduce the worth of the degree you are working toward.

I promise 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 changed if necessary.

We reserve the right to impose a penalty on your assessment grade if you violate any of the above guidelines. Please read this entire policy again and understand it well, as exceptions will not be allowed.

**Missing Grades**

~ be sure to attend the recitation for which you are registered to avoid missing grade issues
~ check your Blackboard Section website **every week** to make sure your latest grade has been posted, do this even if you already know your grade
~ if a grade is not posted, alert your TA immediately
~ we cannot promise to be able to resolve a missing grade issue if it is reported more than two weeks after the assessment took place

**Overall Course Grade**

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 highest four Activity grades, this is your Activity Average,
(ii) calculate the average of your highest five Quiz grades, this is your Quiz Average,
(iii) overall course grade = \(0.3 \times \text{Activity Average} + 0.5 \times \text{Quiz Average} + 0.2 \times \text{Final Exam grade}\), rounded UP to the next higher whole number.

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<th>Letter</th>
<th>fin.grade</th>
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<tr>
<td>FSU does not award A+</td>
<td>B+</td>
<td>87 - 89</td>
<td>C+</td>
<td>77 – 79</td>
<td>D+</td>
<td>67 - 69</td>
<td>F</td>
<td>≤59</td>
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<tr>
<td>A</td>
<td>≥93</td>
<td>B</td>
<td>83 - 86</td>
<td>C</td>
<td>73 – 76</td>
<td>D</td>
<td>63 - 66</td>
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<tr>
<td>A-</td>
<td>90 – 92</td>
<td>B-</td>
<td>80 – 82</td>
<td>C-</td>
<td>70 – 72</td>
<td>D-</td>
<td>60 - 62</td>
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**Note:** we do not do any grade calculations in Blackboard at all, we use the Blackboard grade center only to store and display grades. Please ignore the grade totals and/or averages that you may see there.

**GRADING APPEALS**

During the course of the term, if you believe that a paper was unfairly graded by your TA, email her/him and make an appointment to go to her/his office to see your paper and discuss it with her/him. If, after that discussion, the matter is not resolved, email me (Radha) and ask me to re-grade your paper.

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STUDENTS WITH DISABILITIES

If you are a person with a disability and you need special accommodations, register with the Student Disability Resource Center (SDRC) at [http://www.disabilitycenter.fsu.edu/](http://www.disabilitycenter.fsu.edu/) and bring me a letter in the first week of class from the SDRC stating that you are eligible to receive special accommodations. 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. You may choose to complete the activities in class or at the SDRC testing center. 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.

STUDENTS COMPLETING AN INCOMPLETE OR AUDITING

If you are auditing this course or taking it to complete an "Incomplete", make yourself known to me so that I may let you have access to our Blackboard websites. If you are completing an "Incomplete", let me know who your former instructor was so that I may inform them of your grade at the end of the term.

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 old grades.

ACADEMIC HONESTY

See [http://www.fsu.edu/~dof/honorpolicy.htm](http://www.fsu.edu/~dof/honorpolicy.htm) for a full statement of the Academic Honor Policy, FSU Academic Honor Pledge and Academic Honor Violations. Academic honor violations will not be tolerated and will be dealt with following the Procedures for Resolving Cases. However, we do encourage you to work collaboratively in class and out of class when reviewing course materials or preparing for a quiz/final exam. Note that, for any exercise, mere copying of the solution without understanding the ideas involved will not aid your learning. We expect you to work individually on quizzes and on the final exam — do not request help from anyone and do not give help to anyone at those times.

In order to foster an organized, cooperative, safe and clean learning environment, both inside and outside of class, where each of you has the opportunity to hear and be heard, to participate and learn, where we have the opportunity to facilitate your learning as best as we can, we all will try to keep the following set of "promises".

TO THE BEST OF OUR ABILITY, WE WILL

~ Come to class on time, begin class on time and end class on time. If it is necessary for us to arrive late we will either let you know in advance or have a message sent to class. If we know in advance that we have to dismiss class early, we will let you know at the beginning of class. We will let you know in advance of any other changes to plans.

~ Be organized with our course materials, your assessments, your grades, etc.

~ Bring our organized course materials, writing materials and calculator to every class meeting.

~ Be ready to answer your questions, both academic and procedural. If we do not immediately know the answer to your question, we will do our best to assist you in finding the answer.
~ Repeat something you did not hear or rewrite something you could not read.

~ Give every student equal opportunity to speak and we will listen respectfully to all students.

~ Never consider a question to be a "stupid" question. If something is bothering you then it certainly needs to be cleared up.

~ Be non-discriminatory, respectful and polite to you and among ourselves.

~ Not eat, drink or use cell phones or other remote communication devices in the classroom, we will devote our entire time and attention to your learning. We will set our communication devices to vibrate so that they do not ring audibly and distract the class.

~ Put our trash in the trashcan and clean the teaching space before we leave so that the next class comes in to a clean room.

~ Make sure that you leave this course with the skills you need for further classes or future jobs.

**TO THE BEST OF YOUR ABILITY, YOU WILL**

~ Come to class on time, be ready to begin class on time and stay until class is dismissed. If it is necessary for you to arrive late or leave early, you will do so as quietly and unobtrusively as possible and you will sit in the seats closest to the door on those occasions.

~ Be organized with your course materials, worked problems, etc. You will have your name, course code and section number written on all your papers.

~ Bring your organized course materials, writing paper and pencils, calculator and any questions you may have to every class meeting.

~ Be ready to ask your questions when you come to class or office hours, or when you visit the helpdesk. To this end, you will keep up-to-date with the material by reviewing your notes after each class, re-doing the class examples on your own and working through the practice problems as soon as they become available.

~ Take notes during class and let us know if you cannot hear what we say or if you cannot read what we write.

~ Listen attentively when either your instructor or a fellow student is saying something that is relevant to the class.

~ Never consider a fellow student's question to be a "stupid" question. In addition, you will always ask your questions, no matter how "stupid" you think they are. If something is bothering you then it certainly needs to be cleared up.

~ Be non-discriminatory, respectful and polite to your fellow students and to us.
~ Not eat, drink or use cell phones or other remote communication devices in the classroom, you will devote your entire time and attention to your learning. You will set your communication device to vibrate so that it does not ring audibly and distract the class. In addition, you will have your communication device within easy reach so that, in case you forget to set it to vibrate, you do not have to hunt for it if it rings during class. If it rings during class, you will either turn it off as quickly as possible or take the call outside the classroom.

~ Put your trash in the trashcan before you leave so that the next class comes in to a clean room.

~ Always attend to the lesson and be aware of what is going on in class, work together and discuss the material with your classmates (plan on studying three hours at home for every hour spent in class), seek help outside of class as soon as you realize you need it. You will get the most out of this class because it's your class!

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**Students in my class**

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