



**Introduction to Applied Statistics**  
**STA 2122 (3 credit hours\*) Section 23**  
**Fall: August 24 – December 11, 2015**

**Instructor:** Katrina McAfee  
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**Office:** OSB 209G  
**Office Hours:** Friday 11:00am – 12:00pm  
Or by appointment if you have class conflicts with the times above  
**Course URL:** <http://campus.fsu.edu>  
**Class Meetings:** TR 9:30 – 10:45 AM, HCB 207

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**Required Course Resources**

**Textbook:** The Basic Practice of Statistics, 6th ed, Moore/Notz/Fligner  
**eBook & StatsPortal:** <http://courses.bfwpub.com/bps6e>  
**Blackboard Website:** <http://campus.fsu.edu>  
(STA2122-0023.fa15) Introduction to Applied Statistics  
**Calculator:** Any scientific or graphing calculator. These are not provided. No cell phones permitted as substitutes.

**Comments:**

- ❖ The hard copy of the text book is **not** required. However, this course **does** require StatsPortal. The eBook that is packaged within the StatsPortal is exactly the same as the hard copy. The bookstore sells the hard copy packaged with StatsPortal, as well as the hard copy alone. Be sure to purchase the hard copy with StatsPortal. The two are the same price; however, if you purchase StatsPortal as a stand-alone product from the publisher at the StatsPortal link above, you will pay a discounted price. The bookstore also sells StatsPortal Access Cards.
- ❖ StatsPortal is **NOT** compatible with Safari or Google Chrome browsers. Fully supported browsers are Internet Explorer and Firefox on a Windows operating system and Firefox on a non-Windows (e.g. Mac) operating system. If you use Safari or Chrome, the grade center will not correctly record your grade even if everything else appears to be operating normally.



- ❖ To sign up for your course in StatsPortal:
  - ✓ Go to <http://courses.bfwpub.com/bps6e.php>
  - ✓ Click on “REGISTER AN ACTIVATION CODE” (if you bought from the bookstore) or “PURCHASE ACCESS TO STATSPORTAL” (if you just want the eBook).
  - ✓ Enter the activation code that came with your textbook (if you bought from bookstore).
  - ✓ Enter your name, FSU email address, and choose a password.
  - ✓ Follow the prompts, select “FL” as state, “Florida State University” as your institution, “Intro to Applied Statistics (STA2122) / Katrina McAfee” as your course/instructor, and “0023” as your section.

### **Course Description**

- ❖ **Prerequisite:** A grade of “C-” or better in MAC 1105 College Algebra (or equivalent). Students should be comfortable with basic algebra operations, e.g., manipulating algebraic equations, substituting values for variables, or solving for unknown variables.
- ❖ **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, chi-square tests, and 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 L.S. 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.

### Grading

|                            |     |
|----------------------------|-----|
| Homework                   | 10% |
| Videos & Reading Questions | 5%  |
| In-Class Activities        | 5%  |
| Quizzes                    | 10% |
| L.S. Common Assessment     | 5%  |
| Midterm 1                  | 20% |
| Midterm 2                  | 20% |
| Final Exam                 | 25% |

### Scale

| Letter       | %     | Letter | %     | Letter | %     | Letter | %     | Letter | %    |
|--------------|-------|--------|-------|--------|-------|--------|-------|--------|------|
| No A+ at FSU |       | 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 |        |      |

### Policies

- ❖ First day attendance at FSU is mandatory. Students not present on the first day will be dropped from the course. Attendance, in general, is not. However, there will be both announced and unannounced quizzes, as well as in-class activities. Activities **cannot** be made up.
- ❖ The lowest quiz grade will be dropped.
- ❖ If class is missed, the student is responsible for all material he/she missed. Please obtain the notes from another student. I will be happy to answer any questions you have on the material during office hours or at an appointment.
- ❖ It is your responsibility to check Blackboard/StatsPortal daily. Do NOT wait until the last minute to attempt homework. **Technical difficulties are not an excuse for missed homework assignments.**
- ❖ Allow 2 working days for email response. Be aware that email sent from outside the FSU domain may not get through. If you do not receive a response within that time frame, meet with me in person before or after class or during office hours.



- ❖ Tables will be provided on exams. However, students must bring their own calculator, pencil, and eraser to exams. Calculators cannot be shared, will not be provided, and cannot be substituted with a cell phone.
- ❖ Makeup exams and quizzes will not be given, except in the instance of a documented University excused absence. You are allowed **1 week** to make up the missed assignment.
- ❖ Inform me within 2 weeks of an incorrect or missing grade. Otherwise, the grade will remain as initially submitted. If you would like to appeal a grade, please email me to set up an appointment to discuss it within 1 week of the paper's return.
- ❖ Success in this class hinges upon your understanding and practice of the material. Therefore, it is imperative that you complete all assignments and ask any questions you may have both during class and office hours.

### **LIBERAL STUDIES FOR THE 21<sup>st</sup> CENTURY:**

#### **Quantitative and Logical Claims**

The *Liberal Studies for the 21<sup>st</sup> 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 offers a transformative experience; this course has been approved as meeting the Liberal Studies requirements 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.



#### **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/Academics/Academic-Honor-Policy>.)

### **Americans With Disabilities Act**

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. 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/>

### **Free Tutoring from FSU**

On-campus tutoring and writing assistance is available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of on-campus tutoring options - see <http://ace.fsu.edu/tutoring> or contact [tutor@fsu.edu](mailto:tutor@fsu.edu). High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

### **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.

### **Final Exam Note:**

No instructor of an undergraduate course may give a final examination at a time other than that which appears on the Web site of the Office of the University Registrar unless he or she has obtained prior approval from the Undergraduate Policy Committee. Such approval must be requested, in writing, at least three weeks prior to the scheduled final exam. Refer to [http://registrar.fsu.edu/dir\\_class/exam\\_schedule.html](http://registrar.fsu.edu/dir_class/exam_schedule.html) for any questions regarding this policy.

## FALL 2015 TENTATIVE PACING SCHEDULE

### STA 2122 section 23

| Week  | MONDAY                    | TUESDAY  | WEDNESDAY  | THURSDAY  | FRIDAY |
|---|---------------------------|--|--|---|--------|
| Aug 24-28   |                           | Syllabus<br>First-day Attendance<br>Terminology & Graphs |  | Graphs & Summary Stats  |        |
| Aug 31-4  |                           | Summary Stats  |  | Normal Distribution<br><b>Quiz 1</b>                            |        |
| Sep 7-11  | Labor Day<br>(No classes) | Normal Distribution                                      |  | Normal Distribution   |        |
| Sep 14-18   |                           | Normal Distribution                                      |  | Normal Distribution   |        |
| Sep 21-25   |                           | Central Limit Theorem                                    |  | Central Limit Theorem<br><b>Online Quiz 2</b>                   |        |
| Sep 28-Oct 2  |                           | MIDTERM 1 (20%)  |  | One Sample Inference  |        |
| Oct 5-9   |                           | One Sample Inference                                     |  | One Sample Inference  |        |
| Oct 12-16   |                           | One Sample Inference                                     |  | Nonparametric Stats<br><b>Liberal Studies Common Assessment</b> |        |
| Oct 19-23   |                           | One-Way ANOVA  |  | One-Way ANOVA   |        |
| Oct 26-30   |                           | Two-Way ANOVA  |  | Two-Way ANOVA   |        |
| Nov 2-6   |                           | Simple Linear Regression                                 |  | Simple Linear Regression  |        |
| Nov 9-13  |                           | MIDTERM 2 (20%)  | Veterans' Day Holiday<br>(No Classes)                | Regression Inference<br><b>Quiz 3</b>                           |        |
| Nov 16-20   |                           | Regression Inference                                     |  | Regression Inference  |        |
| Nov 23-27   |                           | Regression Inference                                     | Thanksgiving Day Holiday<br>(No classes)             |   |        |
| Nov 30-4  |                           | Regression Inference<br>Chi-Square Tests                 |  | Chi-Square Tests<br><b>Online Quiz 4</b>                        |        |
| Dec 7-11<br>FINALS WEEK   |                           |  | Cumulative Final (25%)<br>10:00am - 12:00pm<br>Dec 9 |   |        |
| <p><b>We will have several unannounced assessments, in the form of quizzes or group activities or attendance-taking, which will contribute 20% to your overall course grade. You should therefore attend class every day, stay from the beginning to the end and review the previous day's lesson before coming to class each day. You should also pay attention in class because the quizzes may cover the same day's material. There may be more than one unannounced assessment in one class period.</b></p> |                           |  |  |   |        |

This schedule has supplementary material planned in to ensure that we complete the core topics even if we fall behind schedule. Since we may progress a bit slower or a bit faster than planned, some of the topics listed here may be omitted or extra topics included as appropriate.