Department of Mathematics and Statistics  
Math 1342.501—Introduction to Probability and Statistics (Online)  
Fall 2020

Instructor: Mrs. Sullivan  
Email: SullivanRK@sfasu.edu  
Class Times & Place: This class is completely online

Office Hours (all through Zoom):  
Monday, Wednesday, Friday: 10 am – 10:50 am  
Tuesday and Thursday: 2 pm – 3:15 pm  
Use the following link to Zoom in for office hours: https://sfasu.zoom.us/my/sullivanrk  
Passcode: 1342  
Meeting ID: 526 704 8894

Course Description: Probability, random variables, mean and variance, binomial distribution, normal distribution, statistical inference and linear regression.

Text and Materials: Discovering Statistics (Bundle) by Hawkes and Marsh, 3rd Edition.  
Online access to the Hawkes Learning System is required. You can gain access by either using the access code from the bundle or by purchasing access from Hawkes. You will also need a scientific calculator. I will be using the TI-30XS MultiView. A graphing calculator is permitted but not required. Please make sure that you are comfortable with the calculator that you select.

Attendance Policy  
This is an online class. You are responsible for all due dates and material. Please use the calendars located at the end of the syllabus to help you stay on track.

Grading Policy:  
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawkes Lessons</td>
<td>25%</td>
<td>[CO: 1,2,3]</td>
</tr>
<tr>
<td>WebTest 1</td>
<td>15%</td>
<td>[CO: 1,2,3]</td>
</tr>
<tr>
<td>WebTest 2</td>
<td>15%</td>
<td>[CO: 1,2,3]</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
<td>[CO: 1,2,3]</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>25%</td>
<td>[CO: 1,2,3]</td>
</tr>
</tbody>
</table>

Grading Scale:  
<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% - 100%</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>80% - 90%</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>70% - 80%</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>60% - 70%</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Below 60%</td>
<td></td>
</tr>
</tbody>
</table>

Course Requirements  
- **Hawkes Lessons**—The lesson schedule is located at the end of the syllabus. [CO 1, 2, 3]  
- **Two WebTests**—The WebTests are designed to make sure that you are keeping up with the material. These are online tests through Hawkes. Additional information about the WebTests can be found later in the syllabus.[CO 1, 2, 3]  
- **Midterm Exam**—The midterm exam is an online exam through Hawkes. [CO 1, 2, 3]  
- **Comprehensive Final Exam**—The final exam is an online exam through Hawkes [CO 1, 2, 3]  
- **Student Responsibility**—It is your responsibility to keep up with all due dates and exam dates. It is your responsibility to check Hawkes and d2l daily.

Exam Calendar and Information:  
<table>
<thead>
<tr>
<th>Exam</th>
<th>Due Date</th>
<th>Exam Material</th>
</tr>
</thead>
</table>
| WebTest 1  | September 18th | All material covered from 1.1 through 4.3  
(see schedule for a detailed list of sections) |
| Midterm Exam | October 16th | All material covered from 1.1 through 8.2  
(see schedule for a detailed list of sections) |
| WebTest 2  | December 4th | All material covered from 8.3-11.4b  
(see schedule for a detailed list of sections) |
| Final Exam | December 9th | All material covered in the course  
The final exam is comprehensive  
(see schedule for a detailed list of sections) |

AARC Tutoring: The AARC (Academic Assistance and Resource Center) in the Steen Library has free help available! The AARC is also available through Zoom. Please go to the following website to get up to date information about getting help through the AARC: http://www.sfasu.edu/aarc/tutoring
Hawkes Learning System Lessons:

The Hawkes lessons are how you will learn and gain confidence in the material for this course. These lessons play the role of lecture and homework in a face-to-face class. There are 27 total lessons to complete on Hawkes. Your two lowest Hawkes lessons will be dropped. Each time you work through a lesson, you will work through the lesson in three parts: learn, practice, certify.

1. Part 1: Learn
   The first part of the Hawkes lesson plays the role of the lecture that you would have in a face-to-face course. This part will introduce you to the material covered in that sections. You will see examples completed step by step.

2. Part 2: Practice
   The second part of the lesson allows you to practice with what you just learned. This part allows you to gain confidence in the new material.

3. Part 3: Certify
   The final part is where you get your grade for the lesson. You must certify each lesson in order to get a grade. Once you certify each lesson, your grade for that lesson is 100%. You will see a required mastery for each lesson. This tells you how many questions you need to get correct in order to master the lesson. Once you have mastered the lesson, it is certified and your grade for that lesson is 100%. For example, if it says that the required mastery is 10 out of 13 then once you get 10 questions right, you have certified the lesson.

Note: You can go through any of the three parts as many times as you want

Due dates are posted on the schedule at the end of the syllabus as well as on the Hawkes Learning System. On the scheduled due date, the assignment is due at 11:59 pm. The following is information for the penalty when completing a Hawkes lesson after the stated due date:

- 1 day late: 0% penalty (This is to allow you flexibility with the due dates of the lessons)
- 2 days late: 0% penalty (This is to allow you flexibility with the due dates of the lessons)
- 3 days late: 25% penalty
- 4 days late: 50% penalty
- 5 days late: 75% penalty
- More than 5 days late: 100% penalty

Note: this penalty structure is only for the Hawkes lessons

You need to figure out blocks of time throughout the week that you plan to work on the lessons. Do NOT wait until the due date to try and complete the lessons due that day. Any Hawkes work done after December 9th will not count. You need to pace yourself in order to successfully complete the lessons for that week. As stated above, there is no penalty if the lessons are 1 to 2 days late. This will hopefully help you fit this class to your schedule better. You should always try to stay at least a lesson ahead of schedule. One lesson might take you longer than another one.

Miscellaneous:

- It is your responsibility to keep up with all due dates for the course. It takes dedication and time management to succeed in an online course.

- It is your responsibility to check D2L (https://d2l.sfasu.edu/) and Hawkes on a daily basis. You are responsible for anything posted on D2L or on Hawkes.

- I like to use D2L for storage and communication. I will store course files on D2L like the syllabus, formula sheet, and tables. I put announcements on the D2L newsfeed. You will spend most of your time in this course on the Hawkes Learning System.

- Email is the easiest way to get in touch with me. My email address is SullivanRK@sfasu.edu

- December 9th is the last day to work on Hawkes.
The following is an excerpt from SFA Policy 5.4:

The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;

2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

See [http://www2.sfasu.edu/math/docs/syllabi/MTH220Syllabus.pdf](http://www2.sfasu.edu/math/docs/syllabi/MTH220Syllabus.pdf) for elements common to all sections.
Exam Dates and Information
Fall 2020

- **WebTest 1:**
  - WebTest 1 is to be completed online through Hawkes
  - WebTest 1 covers our lessons in chapters 1 through 4 (see schedule on next page)
  - WebTest 1 is due September 18th at 11:59 pm
  - Once you have finished the lessons on WebTest 1, you will want to do the following:
    - Review the lessons
    - Complete the practice for WebTest 1 on Hawkes (under the test tab)
    - Complete WebTest 1
  - You have one attempt at WebTest 1
  - You will receive your score on this WebTest immediately after it is submitted. You will then be allowed to review the WebTest starting September 21st

- **Midterm Exam:**
  - The midterm exam is to be completed online through Hawkes
  - The midterm covers all lessons covered so far this semester through 8.2 (see schedule)
  - The midterm exam is due October 16th
  - You need to have a copy of the formula packet and tables printed off of D2L.

- **WebTest 2:**
  - WebTest 2 is to be completed online through Hawkes
  - WebTest 2 covers all lessons covered from 8.3-11.4b (see schedule on next page)
  - WebTest 2 is due December 4th
  - Once you have finished the lessons on WebTest 2, you will want to do the following:
    - Review the lessons
    - Complete the practice for WebTest 2 on Hawkes (under the test tab)
    - Complete WebTest 2
  - You have one attempt at WebTest 2
  - You will receive your score on this WebTest immediately after it is submitted. You will then be allowed to review the WebTest starting December 7th
  - You need to have a copy of the formula packet and tables printed off of D2L.

- **Final Exam:**
  - The final exam is to be completed online through Hawkes
  - The final covers all lessons covered in this course (see schedule)
  - The final exam is due December 9th
  - You need to have a copy of the formula packet and tables printed off of D2L.
## Fall 2020 Lesson Due Date Schedule

<table>
<thead>
<tr>
<th>Lesson Name</th>
<th>Due Date</th>
<th>WebTest 1 due September 18&lt;sup&gt;th&lt;/sup&gt;</th>
<th>Midterm Exam due October 16&lt;sup&gt;th&lt;/sup&gt;</th>
<th>Comprehensive Final Exam due December 9&lt;sup&gt;th&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1-1.8 Introduction to Statistical Thinking</td>
<td>Aug 28, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Data Classification</td>
<td>Aug 28, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Frequency Distributions</td>
<td>Sep 04, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Histograms and Other Graphical Displays of Quantitative Data</td>
<td>Sep 04, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 Analyzing Graphs</td>
<td>Sep 04, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Measures of Location</td>
<td>Sep 11, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2 Measures of Dispersion</td>
<td>Sep 11, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 Measures of Relative Position, Box Plots, and Outliers</td>
<td>Sep 11, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1 Introduction to Probability</td>
<td>Sep 25, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1 Types of Random Variables</td>
<td>Sep 25, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.2 Discrete Random Variables</td>
<td>Oct 02, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.4 The Binomial Distribution</td>
<td>Oct 02, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.2 The Normal Distribution</td>
<td>Oct 09, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3 The Standard Normal Distribution</td>
<td>Oct 16, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.4 Applications of the Normal Distribution</td>
<td>Oct 16, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.3 The Distribution of the Sample Mean and the Central Limit Theorem</td>
<td>Oct 23, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.4 The Distribution of the Sample Proportion</td>
<td>Oct 23, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.2 Interval Estimation of the Population Mean</td>
<td>Oct 30, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.3 Estimating the Population Proportion</td>
<td>Oct 30, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.1 Introduction to Hypothesis Testing</td>
<td>Nov 06, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.2a Testing a Hypothesis about a Population Mean with Sigma Known</td>
<td>Nov 06, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.2b Testing a Hypothesis about a Population Mean with Sigma Unknown</td>
<td>Nov 13, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.2c Testing a Hypothesis about a Population Mean using P-values</td>
<td>Nov 13, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.4a Testing a Hypothesis about a Population Proportion</td>
<td>Nov 20, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.4b Testing a Hypothesis about a Population Proportion using P-values</td>
<td>Nov 20, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Scatterplots and Correlation</td>
<td>Dec 04, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2 Fitting a Linear Model</td>
<td>Dec 04, 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following page gives you a breakdown of the semester by week. I hope both of these calendars help you to stay on track.
Please see previous pages in the syllabus for details on all assignments.
Most of your semester is spent on Hawkes but I will make announcements on D2L or contact you through email.
My advice is to always stay at least one lesson ahead of schedule.
NEW STUDENTS

1. Go to https://learn.hawkeslearning.com
2. Click Create an Account
3. Choose one of the following:
   - Complete the account creation steps.
   - If you selected Temporary Access, to make your account permanent:
     4. Click Activate. Note: you are able to click here, even if your temporary access code has expired.
     5. Using the pop-up window, complete one of the following steps:
        - If you have purchased a license number from the bookstore, type it in and click Activate Now.
        - If you need to purchase your materials, click Purchase Online to do so with a credit card.

RETURNING STUDENTS

1. Sign in to your account at https://learn.hawkeslearning.com
2. Locate the product being used in this course on your Dashboard and click Upgrade. **If you do not see Upgrade on your Dashboard, click Enroll, select the following for both your instructor and section: Upgrade to New Edition, and click Enroll. Then select Upgrade.**
3. Upon selecting Upgrade, you will be prompted to enroll into your course. Select your instructor name and section, then click Enroll.
4. This will complete the process, and you will see your upgraded access to the new edition courseware on your Dashboard.

WE CAN HELP

If you have any questions about your account, please contact Hawkes Technical Support:

1-800-426-9538
Monday–Friday, 8:00 a.m.–10:00 p.m. ET

Online Chat

http://chat.hawkeslearning.com

24 hours a day, 7 days a week