Department of Mathematics and Statistics
MTH 220—Introduction to Probability and Statistics (Online)
Section 503 - Summer 2019

Instructor: Mrs. Robin Sullivan  Class Times & Place: This is an online course with two face-to-face exams
Office: 343 Mathematics Building
Email: SullivanRK@sfasu.edu
Office Hours: Please email me to setup an appointment

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, 2nd 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 with two face-to-face exams. You are responsible for all due dates and material. Please use the calendar located at the end of the syllabus to help you stay on track.

Grading Policy:
- 15% Hawkes Lessons [CO: 1,2,3]
- 10% WebTest 1 [CO: 1,2,3]
- 10% WebTest 2 [CO: 1,2,3]
- 30% Midterm Exam [CO: 1,2,3]
- 30% Comprehensive Final Exam [CO: 1,2,3]
- 5% D2L Discussions [CO: 1,2,3]

Grading Scale:
- 90% - 100%: A
- 80% - 90%: B
- 70% - 80%: C
- 60% - 70%: D
- Below 60%: F

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 on pages 4 - 5 of the syllabus. [CO 1, 2, 3]
- Midterm Exam — The midterm exam is a written face-to-face exam on July 31st. The midterm exam is not an online exam. [CO 1, 2, 3]
- Comprehensive Final Exam — The final exam is a written face-to-face exam on August 16th. The final exam is not an online exam. [CO 1, 2, 3]
- D2L Discussions — There will be two required D2L discussions at the end of the semester [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>Date</th>
<th>Exam Location</th>
<th>Exam Time*</th>
<th>Exam Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>Wednesday, July 31st</td>
<td>Kennedy Auditorium</td>
<td>3 pm – 7 pm</td>
<td>All material covered from 1.1 through 8.3b (see schedule for a detailed list of sections)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Friday, August 16th</td>
<td>Kennedy Auditorium</td>
<td>3 pm – 7 pm</td>
<td>All material covered in the course (see schedule for a detailed list of sections)</td>
</tr>
</tbody>
</table>

*Each exam is roughly a two-hour exam. The exam proctors will be at the exam location from 3pm to 7pm to allow flexibility with your schedule. All exams must be turned in by 7 pm. If the location, date or time changes, then I will put that information on D2L.
Both the midterm and final exam are face-to-face exams and not online exams. Department policy requires that you bring and be recognizable from either your SFASU Student ID or another valid photo ID before you are permitted to take each exam. If you are not on campus, email me as soon as possible. You can take your exams at an approved testing location. The testing location must be an actual testing center. Most community colleges and universities have testing centers. Note that the face-to-face exams will be written exams, and not completed on the computer. You will be provided with a formula sheet for both face-to-face exams.
Hawkes Learning System Lessons:

The Hawkes lessons are how you will learn the material for this course. These lessons play the role of lecture and homework in a face-to-face class. There are 31 total lessons to complete on Hawkes as well as two online webtests 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 a small amount of flexibility with the due dates)
- 2 days late: 20% penalty
- 3 days late: 40% penalty
- 4 days late: 60% penalty
- 5 days late: 80% penalty
- More than 5 days late: 100% penalty

Note: this penalty structure is only for the Hawkes lessons only

You need to figure out blocks of time that you plan to work on the lessons. Any Hawkes work done after August 16th will not count.

You will have two online exams (WebTests 1 and 2) and two written face-to-face exams (the midterm exam and the final exam) throughout the semester. You will always want to make sure to complete the lessons being tested on each exam ahead of time. You will need to allow time to digest the material and study the lessons to do well on these exams.

You should always try to stay at least a lesson ahead of schedule. One lesson might take you longer than another one. Some due dates have multiple lessons due.

AARC Tutoring: The AARC (Academic Assistance and Resource Center) in the Steen Library has free help available. We are very lucky to have two options for help through the AARC this semester. There will be Statistics walk-in table hours available and virtual help available.

- Virtual Statistics AARC Help:
  - You can access ZOOM by clicking the following link: [https://sfasu.zoom.us/j/558815359](https://sfasu.zoom.us/j/558815359) or you can download the free ZOOM app on your phones. If you do that, you will need the following code: 558-815-359
  - The hours for virtual tutoring will be **Mondays and Wednesdays 3 pm to 4 pm**

- The AARC will also have in person tutoring for Statistics at the walk-in table during the following times:
  - **Mondays, Wednesdays, and Thursdays: 1 to 5 pm**
  - **Tuesdays: 3 to 5 pm**
Miscellaneous:

- We are covering the same amount of material as a spring or fall semester but in only five weeks. You must be disciplined to keep up with the material. It is also important to get help before it is too late.

- 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 especially in the summer.

- It is your responsibility to check D2L [https://d2l.sfasu.edu/] on a regular 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, tables, and practice exams. I put announcements on the D2L newsfeed. You will spend most of your time in this course on the Hawkes Learning System.

- Emails should not resemble text messages. You need to make sure to always address the person that you are sending the email to and be complete with your sentences.

- Email is the easiest way to get in touch with me. If you email me during the school week and you do not get a response within 24 hours, resend the email. It is possible that it was sent to junk mail. I want to make sure that I respond to your questions quickly so that you do not get behind. My email address is SullivanRK@sfasu.edu

- If you are retaking this online course, you do not need to buy a new access code.

- The D2L discussions will take place at the end of the semester. They will allow us to reflect on the semester. The D2L discussions will be on D2L.

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.
Math 220 Exam Dates and Information
Summer 2019

• WebTest 1:
  o WebTest 1 is to be completed online through Hawkes
  o WebTest 1 covers chapters 1-4 (see schedule on next page)
  o WebTest 1 is due July 25th at 11:59 pm
  o 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
  o You have one attempt at WebTest 1

• Midterm Exam:
  o The midterm is a written face-to-face exam that will take place on Wednesday, July 31st in Kennedy Auditorium (3 pm – 7 pm). This is not an online exam.
  o If you have a time conflict that does not allow you to take your exam during the time slot, please let me know in advance so that you can take your exam early.
  o The midterm covers all lessons covered from 1.1 through 8.3b (see schedule)
  o You must bring a picture id (student id or driver’s license)
  o Don’t forget your calculator
  o If you are taking the midterm at a testing center, make sure that I have approved the testing center far in advance.
  o You will have a formula sheet and tables provided to you for the midterm exam. Check d2l to know what the formula sheet and tables will look like.

• WebTest 2:
  o WebTest 2 is to be completed online through Hawkes
  o WebTest 2 covers all lessons covered from 8.4a – 11.4c (see schedule on next page)
  o WebTest 2 is due August 14th at 11:59 pm
  o 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
  o You have one attempt at WebTest 2

• Final Exam:
  o The final exam is a written face to face exam that will take place on Friday, August 16th in Kennedy Auditorium (3 pm – 7 pm). This is not an online exam.
  o If you have a time conflict that does not allow you to take your exam during the time slot, please let me know in advance so that you can take your exam early.
  o The final covers all lessons covered in this course (see schedule)
  o The final exam is comprehensive and mandatory
  o You must bring a picture id (student id or driver’s license)
  o Don’t forget your calculator
  o If you are taking the final exam at a testing center, make sure that I have approved the testing center far in advance.
  o You will have a formula sheet and tables provided to you for the midterm exam. Check d2l to know what the formula sheet and tables will look like.
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<thead>
<tr>
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<th>Due Date</th>
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<td>2.5 - 2.6 Levels of Measurement</td>
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<tr>
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<tr>
<td>3b Graphical Displays of Data: Pie Charts and Bar Graphs</td>
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<td>6.5 - 6.9 Probability Rules: Properties, the Complement, and Addition Rules</td>
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<td>8.3b Reading a Normal Curve Table</td>
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<td>10.5a Student’s t-Distribution</td>
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<td>10.5b Interval Estimation of the Population Mean for a Normal Population with Sigma Unknown</td>
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<td>11.4b Hypothesis Testing Means (z Value)</td>
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<td>11.4c Hypothesis Testing Means (t Value)</td>
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<tr>
<td>12.1a Hypothesis Testing Proportions (p-Value)</td>
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<td>12.1b Hypothesis Testing Proportions (z Value)</td>
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<tr>
<td>5.2 - 5.5 Scatter Plots and Correlation</td>
<td>8/15</td>
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<tr>
<td>5.6 - 5.9 Fitting a Linear Model</td>
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</tbody>
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Advice: Try to always stay at least one lesson ahead of schedule