MTH 220 Class Policy

2020 / Spring

MTH 220.502

Introduction to Probability and Statistics

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Office: 350 NM

Office Hours: 9-10:45 on MWF or by appointment.

Class meeting time and place: Online

Communication:

Please note that email via Brightspace D2L is the best way to contact me during the semester. Please send and check emails through D2L. D2L will be the main medium of communication. I will generally respond to emails within 24 hours unless there is an upcoming weekend or holiday when the email is sent.

Course Description:

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

Text and Materials: Discovering Statistics by Hawkes and Marsh, 2nd edition

The Web Platform for Discovering Statistics by Hawkes and Marsh, 2nd Edition can be launched by following directions given in the quick start guide.

Note: The Web Platform contains an Ebook as well as the Learn, Practice, and Certify components. This platform requires the purchase of an access code. For those interested, a hardback version of the text is available and can be ordered directly from Hawkes or some other book distributor. If for some reason (e.g. delayed financial aid) you cannot purchase an access code for the first day of class, then a temporary access code can be created per the instructions on the quick start guide. Hawkes has excellent technical support and can be reached at 1-800-426-9538.

Course Requirements:

Online Homework and Face-to-Face or Distance-Proctored Exams

Calculator:
A four function (addition, subtraction, etc…) will be sufficient. However, a TI-83 (or better) is quite handy for this course and perhaps future similar courses.

**Course Calendar (For a detailed calendar, see the D2L Calendar):**

<table>
<thead>
<tr>
<th>Course Outline</th>
<th>Approximate time spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Probability</td>
<td>5%</td>
</tr>
<tr>
<td>o Classical Probability</td>
<td></td>
</tr>
<tr>
<td>o Probability Laws (Rules)</td>
<td></td>
</tr>
<tr>
<td>o Counting Techniques</td>
<td></td>
</tr>
<tr>
<td>• Probability Distributions</td>
<td>10%</td>
</tr>
<tr>
<td>o Random Variables</td>
<td></td>
</tr>
<tr>
<td>o Discrete Distributions</td>
<td></td>
</tr>
<tr>
<td>o Binomial Distribution</td>
<td></td>
</tr>
<tr>
<td>o Continuous Distributions</td>
<td></td>
</tr>
<tr>
<td>o Normal Distribution</td>
<td></td>
</tr>
<tr>
<td>• Descriptive Statistics</td>
<td>10%</td>
</tr>
<tr>
<td>o Graphical Display of Data</td>
<td></td>
</tr>
<tr>
<td>o Measures of location</td>
<td></td>
</tr>
<tr>
<td>o Measures of Dispersion</td>
<td></td>
</tr>
<tr>
<td>• Sampling Distributions</td>
<td>15%</td>
</tr>
<tr>
<td>o Random Samples</td>
<td></td>
</tr>
<tr>
<td>o Central Limit Theorem</td>
<td></td>
</tr>
<tr>
<td>• Statistical Inference</td>
<td>40%</td>
</tr>
<tr>
<td>o Estimation</td>
<td></td>
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<tr>
<td>o Point Estimation</td>
<td></td>
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<tr>
<td>o Interval Estimation</td>
<td></td>
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<tr>
<td>o Hypothesis Testing</td>
<td></td>
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<tr>
<td>• Linear Regression</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Grading Policy:** The final average will be computed using the following items and weights:

Hawkes Assignments (15%)

Online Participation (10%)

Exam I (25%)

Exam II (25%)

Final Exam (25%)

**Hawkes Assignments:**
This will consist of homework on the Hawkes software. The due dates for the Hawkes software will be strictly enforced. The due dates are posted on the D2L calendar and can also be found in your Hawkes "progress report". If an assignment is late by one day, then 90% is the highest possible grade. If an assignment is late by two days, then 70% is the highest possible grade. If an assignment is late by three days, then 50% is the highest possible grade. If an assignment is not completed within 3 days of the due date, a grade of 0 will be assigned. For technical support, Hawkes can be reached at 1-800-426-9538.

**Online Participation:**

Several times throughout the summer term you will be required to participate in group discussions involving key concepts in the course. I will place each student in a group of 4-5 students. Also, I will generate the discussions
in D2L. Your grade for this component is based on the frequency, correctness, and quality of your responses.

Exams:

The two exams and final exam are face-to-face. There are no make-ups for missed exams, so make every effort to be present for each exam. If you know ahead of time that you will miss an exam, let me know at least one day before the scheduled exam and we will attempt to work something out. 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. The first exam will be given on February 20 from 4-6 p.m. The second exam will be given on April 16 from 4-6 p.m. The final exam is comprehensive and will be given on May 4 from 4-6:30 p.m. All exams will be administered on campus in room #214 of the Mathematics Building. Note: If a student has a prohibitively long distance to travel to take any exam, he/she may take the exam at a proctored testing center approved by me. If you think you need to take an exam at a proctored location, then contact me as soon as possible. Also, dual credit students should contact me as soon as possible to coordinate exam proctoring at his/her high school campus.

Attendance Policy:

Regular online participation is expected.

Academic Integrity (A-9.1):

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

Withheld Grades Semester Grades Policy (A-54):

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

SFASU 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 at least 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.

Students with Disabilities:

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Acceptable Student Behavior

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Program Learning Outcomes:

This is a general education core curriculum course and no specific program learning outcomes for this major are addressed in this course.

Student Learning Outcomes (SLO): At the end of MTH 220, a student who has studied and learned the material should be able to:

1. Exhibit an understanding of basic probability rules and concepts [CO:1,3]
2. Demonstrate an understanding of different probability models and ways they are used in statistical inference. [CO: 1, 2, 3]
3. Demonstrate an understanding of point estimation of population parameters. [PLO: 1,3]
4. Demonstrate an understanding of interval estimation about population parameters and inference that can be drawn from such techniques. [CO: 1,3]
5. Demonstrate an understanding of hypothesis testing concerning population parameters and inference that can be drawn from such techniques. [CO:1,3]