INSTRUCTOR        Fatemeh Salehibakhsh

E-MAIL               f.salehibakhsh@hccs.edu

MATH 1342: Statistics
Prerequisite: MATH 1314; Must be placed into college-level mathematics.
Credit: 3 (3 lecture)
Topics include histograms, probability, binomial and normal distributions and their applications, correlation and prediction, and tests of statistical hypotheses. Core Curriculum Course.

Textbook: (optional)
Elementary Statistics: A Step by Step Approach by Allan G. Bluman
Publisher: McGraw-Hill Companies, The
Pub. Date: 2007

MATH 1342: Statistics

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Course Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understand basic concepts and vocabulary for probability and statistics.</td>
<td>1.1 Demonstrate knowledge of statistical terms.</td>
</tr>
<tr>
<td></td>
<td>1.2 Understand the difference between descriptive and inferential statistics.</td>
</tr>
<tr>
<td></td>
<td>1.3 Identify types of data, measurement level of variables, and four basic sampling techniques.</td>
</tr>
</tbody>
</table>
2. Organize, analyze, and utilize appropriate methods to draw conclusions based on sample data by using tables, graphs, measures of central tendency, and measures of dispersion.

<p>| 2.1 Construct the relative frequency table from a given set of ungroup data. |
| 2.2 Know and use the different graphs: histogram, frequency polygon, Ogives, Pareto, and pie to present data. |
| 2.3 Compute the mean, median, mode, midrange, range, variance, and standard deviation. |
| 2.4 Identify the various measures of position such as percentiles, deciles, and quartiles. |
| 2.5 Find the total number of outcomes in a sequence of events using tree diagram and multiplication rule. |</p>
<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Course Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Collect univariate and bivariate data, interpret and communicate the results using statistical analyses such as confidence intervals, hypothesis tests, and regression analysis.</td>
<td>3.1 Understand the use of permutation and combination rules.</td>
</tr>
<tr>
<td></td>
<td>3.2 Determine sample spaces and find the probability of an event using classical probability.</td>
</tr>
<tr>
<td></td>
<td>3.3 Find the probability of compound events using addition and/or multiplication rules.</td>
</tr>
<tr>
<td></td>
<td>3.4 Find the conditional probability of an event</td>
</tr>
<tr>
<td></td>
<td>3.5 Construct a probability distribution for a random variable</td>
</tr>
<tr>
<td></td>
<td>3.6 Find the mean, variance, and expected value for a probability distribution function.</td>
</tr>
<tr>
<td></td>
<td>3.7 Find the mean, variance, and standard deviation for binomial distribution.</td>
</tr>
<tr>
<td></td>
<td>3.8 Identify the properties of the normal distribution.</td>
</tr>
<tr>
<td></td>
<td>3.9 Find a confidence interval for the mean when ( s ) is known or ( n &gt; 30 ).</td>
</tr>
<tr>
<td></td>
<td>3.10 Determine the minimum sample size for finding a confidence interval for the mean.</td>
</tr>
<tr>
<td></td>
<td>3.11 Find a confidence interval for the mean when ( s ) is unknown and ( n &lt; 30 ).</td>
</tr>
<tr>
<td></td>
<td>3.12 Find a confidence interval for proportion.</td>
</tr>
<tr>
<td></td>
<td>3.13 Determine the minimum sample size for finding a confidence interval for a proportion.</td>
</tr>
<tr>
<td></td>
<td>3.14 Find a confidence interval of variance and standard deviation.</td>
</tr>
<tr>
<td>4. Calculate probabilities for binomial and normal probability distributions and find specific values for binomial and normal probabilities</td>
<td>4.1 Find the exact probability for ( X ) successes in ( n ) trial of a binomial experiment.</td>
</tr>
<tr>
<td></td>
<td>4.2 Find the area under the normal curve, given various ( z ) values.</td>
</tr>
<tr>
<td></td>
<td>4.3 Find probabilities for a normally distributed variable by transforming it into a standard normal variable.</td>
</tr>
<tr>
<td></td>
<td>4.4 Find specific data values for given percentages using the standard normal distribution.</td>
</tr>
<tr>
<td></td>
<td>4.5 Apply the central limit theorem to solve problems involving sample means.</td>
</tr>
<tr>
<td></td>
<td>4.6 Use the normal approximation to compute probabilities for a binomial variable.</td>
</tr>
</tbody>
</table>
Course Intent: This course is intended for students primarily in health sciences and business rather than math or science majors. It consists of concepts, ideas, and applications of statistics rather than a theory course.

Audience: This course is for students who require a statistics course as a prerequisite for further study.

Assessment/Make-up and Grading
There are assigned homework problems after every section. It is crucial for you to succeed in this class that you do faithfully your homework every week.

There will be 4 major Test, Homework, My Math Lab assignment, quizzes, and comprehensive final exam. One of the lowest grades in your major test will be drop.

Homework policy:
All homework must be completed online using MYMATHLAB.

There will be no make up, since I will drop the lowest grade.

The final exam grade is comprehension and it is accounts for 20% of your course grade, as shown in the following formula:
3 Major Tests; 60%

My Math Lab Homework assignment and quizzes 20%

Grading policy:
Your final course grade is based on the following standard HCCS scale.

<table>
<thead>
<tr>
<th>Final Average</th>
<th>90 ≤ Avg ≤ 100</th>
<th>80 ≤ Avg &lt; 90</th>
<th>70 ≤ Avg &lt; 80</th>
<th>60 ≤ Avg &lt; 70</th>
<th>Avg &lt; 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Course Grade</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
</tbody>
</table>

Withdrawal policy:
If your name is on the roll at the end of the term, you WILL receive a grade. If you wish to drop the class, then it is your responsibility to do that before the final drop date. Neither you nor your instructor will be able to perform the drop after the final drop date. Please refer to the following notice before dropping the class.
If you decide that you need to withdraw from this class, the dead line is in the course outline. In the past, you had to request to be dropped by an instructor or counselor, but now you have the ability to drop yourself online by logging into your HCC student center:
https://hccsaweb.hccs.edu:8080/psp/csprd/?cmd=login&languageCd=ENG

NOTICE:
Students who take a course three or more times will face significant tuition or fee increases at HCC and other Texas public colleges and universities. In addition, state law dictates that students are allowed a maximum of 6 course withdrawals during their entire college career. Starting in the fall of 2007, students with more than 6 drops will be required
to pay additional fees. Prior to course withdrawal, you must confer with your professor or counselor about your study habits, homework, test-taking skills, attendance, course participation, and tutoring or other assistance that is available.

Calculators:
Students can use graphing calculator.

Exams
Exams will be given during the semester all of which will be on-line on Blackboard. This means you can take the exam anywhere you have internet access.
All the exams and quizzes will consist of multiple choice questions. You may Take an exam as schedule. If you wait till the last minute to take an exam and something goes wrong (such as power failure), you have yourself to blame. Similarly, if you wait till the last few seconds of a quiz or an exam to submit your answers and you get kicked out by the computer, again, you have yourself to blame.

Late Assignment
Any quizzes or exams submitted after the time limit for whatever reason will not be accepted. Indeed, the computer will not allow you to take a quiz or an exam once you exceed the time limit.

Project, Term Papers, etc.
There are no projects or term papers required for this course.

Academic Dishonesty
Each student is expected to be in complete compliance with the College's policy on Academic honesty set forth in the catalog and student handbook. The exams and quizzes are online. I expect you to be honest and responsible enough to do your own work. If there is any issue of concern to you or you need any clarification on anything, do not hesitate to send me an email.

Resources and supplemental instruction:
Any student enrolled in Math 1342 at HCC has access to the tutoring labs where one-on-one help is available. The math tutoring labs are staffed with student assistants who can aid students with math problems and offer help with MYMATHLAB. Please check math department for the hours of the tutoring labs. In addition, free online tutoring is provided. For information, go to the math department web page and select the online tutoring link. Another resource is the student solutions manual that may be obtained from the bookstore.

Students with Disabilities:
Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Support Services Office at this college at the beginning of the semester. To make an appointment, please call 713-718-7910. Professors are authorized to provide only the accommodations requested by the Disability Support Office.

BLACKBOARD STUDENT USER ID
Your Blackboard login user ID will be your HCC User ID (sometimes referred to as the “W” number). All HCC students have a unique User ID. If you do not know your User ID you can look it up by visiting the HCC home page:
  o From www.hccs.edu, under the column “CONNECT”, click on the “Student System Sign In” link
  o Then click on “Retrieve User ID” and follow the instructions.

Or use the direct link to access the Student Sign In page:
https://hccsaweb.hccs.edu:8080/psp/csprd/?cmd=login&languageCd=ENG

The default student password is “distance.” Students will then be prompted to change their password after their first login. Please visit the Distance Education Technical Support website if you need additional assistance with your login.

If you haven't already, please take the time out to visit the link and review the handbook's content to become familiar with the most up-to-date information: http://de.hccs.edu/de/de-student-handbook.
### Course Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 19</td>
<td>Sec 1.1</td>
</tr>
<tr>
<td>Jan 24</td>
<td>Sec 1.2, 1.3</td>
</tr>
<tr>
<td>Jan 26</td>
<td>Sec 1.4, 1.5</td>
</tr>
<tr>
<td>Jan 31</td>
<td>Sec 1.5</td>
</tr>
<tr>
<td>Feb 2</td>
<td>Sec 2.1, 2.2</td>
</tr>
<tr>
<td><strong>Feb 4, 5, and 6</strong></td>
<td><strong>Quiz Over Chapter One</strong></td>
</tr>
<tr>
<td>Feb 7</td>
<td>Sec 2.3</td>
</tr>
<tr>
<td>Feb 9</td>
<td>Sec 3.1, 3.2</td>
</tr>
<tr>
<td><strong>Feb 11, 12, and 13</strong></td>
<td><strong>Quiz Over Chapter Two</strong></td>
</tr>
<tr>
<td>Feb 14</td>
<td>Sec 3.3</td>
</tr>
<tr>
<td>Feb 16</td>
<td>Sec 3.4, 3.5</td>
</tr>
<tr>
<td><strong>Feb 18, 19, and 20</strong></td>
<td><strong>Quiz Over Chapter Three</strong></td>
</tr>
<tr>
<td>Feb 21</td>
<td>Sec 5.1</td>
</tr>
<tr>
<td>Feb 23</td>
<td>Sec 5.2, 5.3</td>
</tr>
<tr>
<td><strong>Feb 25, 26, and 27</strong></td>
<td><strong>Test #1 Chapters 1 – 3</strong></td>
</tr>
<tr>
<td>Feb 28</td>
<td>Sec 5.4</td>
</tr>
<tr>
<td>Mar 2</td>
<td>Sec 5.4, 6.1</td>
</tr>
<tr>
<td><strong>Mar 5, 6, and 7</strong></td>
<td><strong>Quiz Over Chapter Five</strong></td>
</tr>
<tr>
<td>Mar 7</td>
<td>Sec 6.2</td>
</tr>
<tr>
<td>Mar 9</td>
<td>Sec 7.1, 7.2, 7.3</td>
</tr>
<tr>
<td><strong>Mar 12, 13, and 14</strong></td>
<td><strong>Quiz Over Chapter Six</strong></td>
</tr>
<tr>
<td>Mar 21</td>
<td>Sec 7.4, 7.5</td>
</tr>
<tr>
<td>Mar 23</td>
<td>Sec 8.1, 8.2</td>
</tr>
<tr>
<td>Mar 20 – 20</td>
<td><strong>Spring Brake</strong></td>
</tr>
</tbody>
</table>
Mar 25, 26, and 27  Quiz Over Chapter 7 – 8

Mar 25, 26, and 27  Test # 2 Chapters 5 -8

Mar 28  Sec 9.1
Mar 30  Sec 9.2, 9.3

Apr 1, 2, and 3  Quiz Over Chapter Nine

Apr 4  Sec 10.1, 10.2
Apr 6  Sec 10.3, 10.4
Apr 11  Sec 10.5
Apr 13  Sec 10.6

Apr 15, 16, 17  Quiz Over Chapter Ten

Apr 18  Sec 4.1
Apr 20  Sec 4.2

Apr 21  Last Day for Administrative / Students Withdrawn 4:30 pm

Apr 22, 23, and 24  Quiz Over Chapter 4

Apr 22, 23, and 24  Test # 3, Chapter 9 – 10

Apr 25  Sec 12.1
Apr 27  Sec 12.2, 12.3

Apr 29, 30 and May 1  Quiz Over Chapter 12

Apr 29, 30 and May 1  Test # 4 Chapters  4 and 12

May 2 and May 4  Final Exam Review

May 6, 7, and 8  Comprehensive Final Exam
My Math Lab is an interactive website where you can:
- Self-test & work through practice exercises with step-by-step help to improve your math skills.
- Do homework assigned by your instructor.
- Study more efficiently with a personalized study plan and exercises that match your book.
- Get help when YOU need it. MyMathLab includes multimedia learning aids, videos, animations, and live tutorial help.

Different directions for different circumstances:
You may be
1. registering for MyMathLab for the first time,
2. enrolling in another MyMathLab course using the same textbook,
3. or enrolling in another MyMathLab course using a different textbook

Follow the set of directions that apply to you.

1. Registering for MyMathLab for the First Time

Before You Begin:
To register for MyMathLab you will need:

1. A MyMathLab student access code: (packaged with your new text, standalone at your bookstore, or available for purchase with a major credit card at www.mymathlab.com)
2. Your instructor’s Course ID number: salehibakhsh95058
3. Your school’s zip code: 77477
4. A valid email address

Student Registration
- Go to http://www.coursecompass.com and click the Register button under Students.
- Review the Before You Start information to ensure you have everything you need to register; click Next.
- On the Course ID page:
  - Enter the Course ID and click on Find Course
  - Choose your enrollment method
    - If your student access code came packaged with your textbook, select Access Code. (Select “Buy Now” to purchase online access using your credit card)
    - Enter your student access code as displayed; use the tab key to move from box to box and use all CAPITAL LETTERS when entering the access code. Click Next.
- Please read all information in the License Agreement and Privacy Policy. Click on Accept if you agree to the terms.
- On the Access Information screen:
  - If you have registered for other Pearson online products and already have a login name and password, select Yes. Boxes will appear for you to enter your login information.
If this is the first time you have registered for a Pearson online product, select No. Boxes will appear for you to enter your desired login name and password. You may want to use your email address as your login name. If you do not use your email address, be prepared with a second login name choice if the one you first selected is already in use. Your login name must be at least 4 characters and cannot be the same as your password.

If you aren’t sure whether you have a Pearson account or not, select Not Sure. Enter your email address and click Search. If you have an account, your login information will be sent to your email address within a few moments. Change your selection to Yes, and enter your login name and password as directed.

On the Account Information page, enter your first and last name and email address. Retype your email address to make sure it is correct.

In the School Location section, select United States from the School Country drop-down menu. Enter your school zip code, and then select your school from the drop-down list.

Select a security question and answer to ensure the privacy of your account. Click Next.

When your registration process is complete you will see a confirmation screen. Click Log In Now to reach CourseCompass, and click Log In. Enter your login name and password and click Log In.


2. Enrolling in Another MyMathLab Course Using the Same Textbook

Before You Begin:
To enroll in a new course you will need:

1. Your instructor’s Course ID number: salehibakhsh95058

Student Enrollment:

- Go to www.coursecompass.com and log in using the login name and password you created when you initially registered for your MyMathLab course. If you forgot you previous login name and password please click the “forgot your login name/password” link.
- In the Courses box, click the Enroll in Another Course button.
- On the Product Selection screen, enter the course ID for the new course you wish to enroll in and click on Find Course.
- On the Confirm Course screen, verify that the course is correct and click on Next.
- After a few moments you will see the Confirmation and Summary screen acknowledging your access to the new course. To log into your new course, click on Enter Course Now.
- At the My CourseCompass login screen login using your same login and password.
- On the My CourseCompass screen you’ll see your new course in your Courses box.

If you have questions or need assistance enrolling in another MyMathLab course contact the student support team at 1 800 677-6337 or go to http://mymathlab.com/contactus_stu.html.

3. Enrolling in Another MyMathLab Course Using a Different Textbook

Before You Begin:
To enroll in a new course you will need:

1. A MyMathLab student access code: (packaged with your new text, standalone at your bookstore, or available for purchase with a major credit card at www.mymathlab.com)

2. Your instructor’s Course ID number: salehibakhsh95058

Student Enrollment:

- Go to www.coursecompass.com and log in using the login name and password you created when you initially registered for your MyMathLab course. If you forgot you previous login name and password please click the “forgot your login name/password” link.
- In the Courses box, click the Enroll in Another Course button.
- On the Product Selection screen, enter the course ID for the new course you wish to enroll in and click on Find Course.
On the Confirm Course screen, verify that the course is correct and click on **Next.**

**Choose your enrollment method**

- If your student access code came packaged with your textbook, select Access Code. Enter your student access code as displayed; use the tab key to move from box to box and use all **CAPITAL LETTERS** when entering the access code. Click Next.
- Select “Buy Now” to purchase online access using your credit card

After a few moments you will see the **Confirmation and Summary** screen acknowledging your access to the new course. To log into your new course, click on **Enter Course Now.**

At the **Course Compass** login screen login using your same login and password.

On the My **CourseCompass** screen you’ll see your new course in your **Courses** box.

If you have questions or need assistance enrolling in another MyMathLab course contact the student support team at 1 800 677-6337 or go to [http://mymathlab.com/contactus_stu.html](http://mymathlab.com/contactus_stu.html).

---

**How to Use Your MyMathLab Course**

**Getting Started in Your Course**

1. After you click on your class name, make sure you have the necessary programs to properly access the course by clicking Browser Check on the homepage. The browser check will prompt you to download the programs you will need to work exercises, watch the videos, view animations, and view the e-book. This may also be found by clicking “Installation Wizard” on the left.

2. **Even if you think that you already have the programs, go ahead and install them again because you will get the updated version that is required to run the MyMathLab program.** You will need to do this on every computer where you plan to work on homework assignments (except for the computers in the labs or in the library at HCC).

**Working on Assignments in Your Course**

1. Click on the homework button on the left.
2. Click on the assignment that you want to work on.
3. Click on the problem that you want to work on. If you are just starting, click on the first problem. If you are returning to finish a section, click on the problem that you need to do next.
4. Your homework will be graded and submitted as you work

**Checking your Grades**

1. Click on the grad book button on the left to check your grades.

**To Watch a Video and Find Extra Practice Problems**

For extra practice or to watch a video lecture:

1. Log into your course.
2. Click on the Chapter Content button.
3. Click on the chapter you want.
4. Click on the section you want.
5. Click on ‘Watch Video Lecture’ to watch a video lecture, or click on ‘Tracked Tutorials’ for extra problems to practice.
6. You can also click on Study Plan on the left for extra practice problems.

**Reviewing Content in a Previous Course**

1. Use your bookmark to go to the MML Portal, or go to [http://www.pearsoncustom.com/tx/hccs_math/](http://www.pearsoncustom.com/tx/hccs_math/)
2. Click on the **Video Tutor** icon next to the course that you need to review.
3. Enter the same login name and password that you created for MML and for the portal.

**Get Help From a Live Tutor**

You have free access to the Math Tutor Center where you can obtain help from a qualified live person. Visit [http://www.pearsontutorservices.com](http://www.pearsontutorservices.com) for available services or call **1-800-435-4084** (5:00 PM - 12:00 AM EST, Sun-Thurs).

**Math Portal for Houston Community College**


This website has been set up to aid you in the use of the many technology resources available for
your math course and textbook including:
1. Watch videos covering topics in your course as well as other math courses
2. Help accessing Tech Support for MyMathLab
3. Direct links to many technology resources including MyMathLab
4. Link to purchase your textbook online

Before you begin:
Be sure you have already registered for MyMathLab and have created your username and password. If you have not already done so please follow the steps on the previous page(s). You will not need a new access code to register for this portal. See the steps below.

Math Portal Registration:
1. Visit http://www.pearsoncustom.com/tx/hccs_math and bookmark the site
2. Find your textbook by scrolling down the website and select the student resource that you would like to view
3. In the pop-up window, select “Register” as a FIRST–TIME USER
4. Please read all information in the License Agreement and Privacy Policy. Click on Accept if you agree to the terms
5. Select “Yes” on the next page that you already have a Pearson account and enter your current MyMathLab username and password that you set up previously and select Next
6. Confirm your information on the next screen and select Finish
7. You have successfully registered for the HCCS Math Portal

Viewing Math Resources:
2. Find your textbook by scrolling down the website and select the student resource that you would like to view
3. Log-in to view the resource with your current username and password under the RETURNING USERS area

If you need help, contact the student technical support team at 1-800-677-6337, or visit www.mymathlab.com and click the Support tab for more information.