Course Description
An introduction to descriptive statistics and statistical inference. Topics include collection, organization, and visualization of numerical data, central tendency, dispersion, probability theory, conditional and joint probabilities, counting rules, discrete and continuous probability distributions, sampling distributions and central limit theorem, and statistical concepts in quality control.

Prerequisite
MATH 341 or 1340 or 1314 or 1324 or 1325; CIS 1301 or 1101 or INFC 1301 with a minimum grade of C.

Textbook and Other Required Resources
This course requires a text and on-line software and there are a number of different combinations of ways to acquire each. The book and a license number to the software can be purchased at the bookstore; or an eBook and Access code to the software can be purchased directly from the publisher. In either of these options, the software is hosted in the cloud and accessible on any machine that is connected to the Internet. Alternately, the book and code can be purchased by either of the above options but software can be installed directly to your personal machine by following the instructions for Traditional Computer Users later in this section. This last option, while available is discouraged.


Traditional Computer Users: If you want to install the software to their machine: Follow the instructions at http://support.hawkeslearning.com/supportcenter/index.php/?article/AA-00281/ and once at the Student and Instructor Downloads page, select the software for: Discovering Business Statistics (textbook by Nottingham, Hawkes). Then select the appropriate download (Mac or PC). I recommend the Student Complete Install for PC or Student Install for Mac. The course ID is: UTRGVDBS

Hawkes Tech support is available at http://support.hawkeslearning.com/supportcenter/index.php?article/AA-00599

There is also a series of videos, getting started articles, and troubleshooting articles available at http://support.hawkeslearning.com/supportcenter/
Use of Web Site
Course materials and the gradebook are posted online in Blackboard Learn at https://my.utrgv.edu/home or directly from https://mycourses.utrgv.edu/. For questions and technical support on using Blackboard Learn, please contact the COLTT help desk at (956) 665-5327.

Add/Drop Policy
Students with unexcused absences who do not attend the first class will be dropped from the class. Absences in excess of three class hours without acceptable documentation may result in a failing grade or a drop from the course.

Mandatory Course Evaluations period
For Spring 2016: Mandatory Course Evaluations period: Students are required to complete an ONLINE evaluation of this course, accessed through your UTPA account (https://my.utpa.edu/); you will be contacted through email with further instructions. The evaluation window closes at 11:59 pm on May 4th, the last day of Spring classes. Students who complete their evaluations by May 4th will have priority access to their grades.

Course Learning Goals and Outcomes
By the end of the semester students should be able to:
1. View decision-making problems from a quantitative perspective
2. Understand the importance of data collection and analysis in making business decisions
3. Understand data visualization tools and apply those tools to business data
4. Summarize business data using descriptive statistics
5. Calculate and explain marginal, joint, and conditional probabilities
6. Solve discrete and continuous probability distribution computations across the business environment
7. Explain the effect of sampling and solve sampling distribution problems that occur in business
8. Make inferences about population parameters from business data
9. Calculate and interpret statistical process control charts

College of Business and Entrepreneurship Learning Goals

<table>
<thead>
<tr>
<th>BBA Learning Goals</th>
<th>This course contributes to the following BBA learning objectives:</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical thinking and problem-solving</td>
<td>☑</td>
<td>Exam and assignments</td>
</tr>
<tr>
<td>Professional attitudes</td>
<td></td>
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<tr>
<td>An appreciation for the role of business in a free enterprise economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic quantitative and analytical skills</td>
<td>☑</td>
<td>Exam and assignments</td>
</tr>
<tr>
<td>Written communication skills</td>
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<tr>
<td>Oral communication skills</td>
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<td>Global awareness</td>
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<td>Appreciation for cultural diversity</td>
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<tr>
<td>Ethical decision-making</td>
<td></td>
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<tr>
<td>Functional areas of business (e.g., finance, marketing, accounting)</td>
<td>☑</td>
<td>Exam and assignments</td>
</tr>
</tbody>
</table>
Department/Major Learning Goals | This course contributes to the following discipline-based learning objectives: | Assessment Method
---|---|---
Develop knowledge necessary to understand, design and implement information systems infrastructure in organizations | | 
Develop skills necessary to understand, design and implement information systems infrastructure in organizations | | 
Develop quantitative skills necessary to effectively evaluate and use information in organizations | ✓ | Exam and assignments

**Exams**
There will be 4 exams with each worth 100 points for a total of 400 points. Exams are web-based and will take place on Hawkes Learning System.

**Missed Exam/Late Assignment Policy**
Prior arrangements must be made with the instructor, whenever possible. To be fair to all other students, the weight of the missed test will be added to the next test. In the case of the last test, the student will be given a comprehensive examination.

This arrangement will only be given to students who are able to produce an official document within a reasonable time (within 7 days) period. Examples of official documents are medical reports, accident or traffic violations, and other unforeseen circumstances. Official documents should be written in English. All non-United States documents must be authenticated and verified.

**Assignments and Group Project Policies**
No late submissions will be accepted for this class. Submissions for group presentation slides are due by 5:00 pm the day prior to the next day’s presentation. No submissions of presentation slides will cause zero grade for all group members for that particular group presentation. Late submissions with acceptable official excuses will be given full credit. However, they must be submitted within a reasonable time period.

Do not place assignments in the faculty mailboxes or office without consent. It will be counted as a late submission. Faculty will not be responsible for loss of assignments that are not submitted in class. Athletic events and routine or pre-planned company assignments are not acceptable excuses for late work. Affected students should make arrangements for their assignments to be submitted prior to the deadline given.

The sub-elements and the final group project must be submitted on time. Students will be dropped from the course if they failed to submit sub-elements by the deadlines. Late projects will be reviewed but they will not be graded nor awarded credit.

**Class Attendance and Participation**
Students are expected to attend all lectures. Federal regulations require that attendance of veterans be carefully monitored. Veterans with excessive absences will be reported. For any student, absences in excess of three class hours without acceptable documentation may result in a failing grade or a drop from the course.

The faculty member will check for attendance randomly in different ways. Students will also be asked to sign the class attendance roll at the end of the lecture. Please note that any student signing the roll for another student who is absent from class will be dropped from the course. Random checks of the signed roll will be made periodically. Any student who has a signature on the roll but is not present when the name is called will also be dropped.
Grading Policies
Four tests and assignments are graded based on the following points:

<table>
<thead>
<tr>
<th>Test</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>100</td>
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<tr>
<td>Exam 2</td>
<td>100</td>
</tr>
<tr>
<td>Exam 3</td>
<td>100</td>
</tr>
<tr>
<td>Exam 4</td>
<td>100</td>
</tr>
<tr>
<td>Assignments</td>
<td>250</td>
</tr>
<tr>
<td>Total</td>
<td>650</td>
</tr>
</tbody>
</table>

Grading scale
Final course grading scale is as follows:
- A: 585 and up
- B: 520 to 584
- C: 455 to 519
- D: 390 to 454
- F: 389 and below

Student Responsibilities
The College of Business Administration expects students to behave in a professional and respectful manner in the classroom and during any interaction with professors, colleagues, and other stakeholders (e.g., recruiters). Here are a few specific policies I would like each student to respect in my course:

- Read and understand course syllabus.
- Check Web site on regular basis.
- Read assigned material before class.
- Academic Honesty: Cheating of any kind is an unacceptable behavior and will not be tolerated.
  - Do your own work.
  - Do not collaborate with others on assignments unless it is specifically allowed.
- Unless otherwise noted, all work submitted to me needs to be typed (double-spaced) and stapled.
  - Make sure you follow instructions and proofread assignments.
- Arrive to class on time.
- Do not disrupt class.
  - No reading the newspaper during class.
  - No chit-chat about non-course related topics.
- No NEDs (Noise Emitting Devices, e.g., cell phones, pagers, mp3 players).
  - Please place your NEDs on vibrate or turn them off during class.
- Instructor permission is required prior to using a lap top in class.
  - A lap top computer used in class should be employed strictly for class related activities.

Academic Integrity
Cheating of any kind is not acceptable and will not be tolerated. Some of the more common types of academic dishonesty relate to the following:

- Plagiarism - Do not use published and/or unpublished material without acknowledging the source. Do not cut and paste materials directly from other sources without paraphrasing or quotation.
- Cheating on assignments or projects – Do not collaborate with other students unless it is specifically stated by the instructor that working with others is allowed (e.g., a team project).
- Cheating on exams – Do not acquire from, or give information to, other students about exams. Do not use materials or resources during exams that are not expressly permitted by the instructor.

Penalties for cheating and plagiarism may range from an F on a particular assignment, an F for the course, to expulsion from the university. Violators of the University's policy on Academic Integrity will be referred to the Office of Student Judicial Services for hearings, and will automatically receive an "F" for the course if found guilty.
See http://portal.utpa.edu/utpa_main/dess_home/dos_home/slts_home/ez_home/ez_sjs/ sjs_integrity for additional information.

**Americans with Disabilities Act (ADA)**

Students with disabilities are encouraged to contact the Disability Services office for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Texas-Rio Grande Valley to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Disability Services office (DS), University Center #108 on Edinburg Campus, 665-7005 or accesibility@utrgv.edu.

**Honor Code**

As members of a community dedicated to honesty, integrity, and mutual respect in all interactions and relationships the students, faculty and administration of our university pledge to abide by the principles in Honor Code.
Course Schedule

This course will move very fast. You are strongly encouraged to review all reading material ahead of class.
This syllabus and schedule are subject to change at the instructor's discretion.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-Jan</td>
<td>Class Introduction</td>
<td></td>
</tr>
<tr>
<td>25-Jan</td>
<td>Ch.1 Decision Making Using Statistics</td>
<td>Sections 1.1-1.4</td>
</tr>
<tr>
<td>27-Jan</td>
<td>Ch.2 Data, Reality, and Problem Solving</td>
<td>Sections 2.1-2.6</td>
</tr>
<tr>
<td>01-Feb</td>
<td>Ch.3 Organizing, Displaying, and Interpreting Data</td>
<td>Sections 3.1-3.7</td>
</tr>
<tr>
<td>03-Feb</td>
<td>Ch.3 Organizing, Displaying, and Interpreting Data</td>
<td></td>
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<tr>
<td>08-Feb</td>
<td>Ch.4 Numerical Descriptive Statistics</td>
<td>Sections 4.1-4.5, 4.8</td>
</tr>
<tr>
<td>10-Feb</td>
<td>Ch.4 Numerical Descriptive Statistics</td>
<td></td>
</tr>
<tr>
<td>15-Feb</td>
<td>Review for Exam 1</td>
<td></td>
</tr>
<tr>
<td>17-Feb</td>
<td><strong>Exam 1</strong></td>
<td></td>
</tr>
<tr>
<td>20-Jan</td>
<td>Ch.5 Probability, Randomness, and Uncertainty</td>
<td>Sections 5.1-5.6 and 5.8</td>
</tr>
<tr>
<td>24-Feb</td>
<td>Ch.5 Probability, Randomness, and Uncertainty</td>
<td></td>
</tr>
<tr>
<td>29-Feb</td>
<td>Ch.5 Probability, Randomness, and Uncertainty</td>
<td></td>
</tr>
<tr>
<td>02-Mar</td>
<td>Ch.6 Discrete Probability Distributions</td>
<td>Sections 6.1-6.6</td>
</tr>
<tr>
<td>07-Mar</td>
<td>Ch.6 Discrete Probability Distributions</td>
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</tr>
<tr>
<td>09-Mar</td>
<td>Review for Exam 2</td>
<td></td>
</tr>
<tr>
<td>21-Mar</td>
<td><strong>Exam 2 (Comprehensive)</strong></td>
<td></td>
</tr>
<tr>
<td>23-Mar</td>
<td>Ch.7 Continuous Distributions</td>
<td>Sections 7.1-7.3</td>
</tr>
<tr>
<td>28-Mar</td>
<td>Ch.7 Continuous Distributions</td>
<td></td>
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<tr>
<td>30-Mar</td>
<td>Ch.7 Continuous Distributions</td>
<td></td>
</tr>
<tr>
<td>04-Apr</td>
<td>Ch.8 Sampling &amp; Sampling Distributions</td>
<td>Sections 8.1-8.3</td>
</tr>
<tr>
<td>06-Apr</td>
<td>Ch.8 Distribution of the Sampling Proportions</td>
<td>Section 8.4</td>
</tr>
<tr>
<td>11-Apr</td>
<td>Review for Exam 3</td>
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</tr>
<tr>
<td>13-Apr</td>
<td><strong>Exam 3 (Comprehensive)</strong></td>
<td></td>
</tr>
<tr>
<td>18-Apr</td>
<td>Ch.9 Estimating Interval Estimation</td>
<td>Sections 9.1-9.4</td>
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<tr>
<td>20-Apr</td>
<td>Ch.9 Estimating Sample Size</td>
<td>Sections 9.5</td>
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<tr>
<td>25-Apr</td>
<td>Ch.9 Estimating Population Proportions</td>
<td>Sections 9.6 and 9.7</td>
</tr>
<tr>
<td>27-Apr</td>
<td>Ch.17 Statistical Process Control - $\bar{x}$ and R charts</td>
<td>Sections 17.1 – 17.3</td>
</tr>
<tr>
<td>02-May</td>
<td>Ch.17 Statistical Process Control - $p$-charts</td>
<td>Section 17.4</td>
</tr>
<tr>
<td>04-May</td>
<td>Review for final exam</td>
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</tr>
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</table>

**Exam 4 (Comprehensive)**

Each chapter, except chapter 1, has an accompanying Hawkes assignment. For assigned work and due dates see the next page.
<table>
<thead>
<tr>
<th>HLS Lessons</th>
<th>Due</th>
<th>Points</th>
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<td>1 2.5 - 2.6 Levels of Measurement and Data Classifications</td>
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<td>2 3.4 Frequency Distributions</td>
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<tr>
<td>3 3.5 - 3.9 Graphical Displays of Data: Line Graphs, Histograms, and</td>
<td>2/7/2016</td>
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<tr>
<td>Stem-and-Leaf</td>
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<tr>
<td>4 4.1 Measures of Location</td>
<td>2/14/2016</td>
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<tr>
<td>5 4.2a Measures of Dispersion</td>
<td>2/14/2016</td>
<td>10</td>
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<tr>
<td>6 4.3 Measures of Relative Position</td>
<td>2/14/2016</td>
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<tr>
<td>7 4.5 - 4.7 Applying the Standard Deviation [Bonus]</td>
<td>2/16/2016</td>
<td>5</td>
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<tr>
<td>8 Chapter 4 Review [Bonus]</td>
<td>2/16/2016</td>
<td>5</td>
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<tr>
<td>9 5.1 - 5.2 Classical Probability</td>
<td>2/28/2016</td>
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<tr>
<td>10 5.4 Probability Rules: Properties, Complement, and Addition Rules</td>
<td>2/28/2016</td>
<td>10</td>
</tr>
<tr>
<td>11 5.5 - 5.6 Probability Rules: Independence, Multiplication Rules, and</td>
<td>3/6/2016</td>
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<tr>
<td>Conditional Probability</td>
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<tr>
<td>12 5.8a Basic Counting Rules</td>
<td>3/6/2016</td>
<td>10</td>
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<tr>
<td>13 6.1 - 6.3 Discrete Random Variables</td>
<td>3/13/2016</td>
<td>10</td>
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<tr>
<td>14 6.5 The Binomial Distribution</td>
<td>3/20/2016</td>
<td>10</td>
</tr>
<tr>
<td>15 6.6 The Poisson Distribution</td>
<td>3/20/2016</td>
<td>10</td>
</tr>
<tr>
<td>16 7.2 Introduction to the Normal Curve</td>
<td>3/27/2016</td>
<td>10</td>
</tr>
<tr>
<td>17 7.3a Reading a Normal Curve Table</td>
<td>3/27/2016</td>
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<tr>
<td>18 7.3b The Normal Distribution</td>
<td>4/3/2016</td>
<td>10</td>
</tr>
<tr>
<td>19 7.3c z - Transformations</td>
<td>4/3/2016</td>
<td>10</td>
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<tr>
<td>20 8.3 The Distribution of the Sample Mean</td>
<td>4/10/2016</td>
<td>10</td>
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<tr>
<td>21 8.4 The Distribution of the Sample Proportion [Bonus]</td>
<td>4/10/2016</td>
<td>5</td>
</tr>
<tr>
<td>22 Chapter 8 Review [Bonus]</td>
<td>4/12/2016</td>
<td>5</td>
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<tr>
<td>23 9.1 - 9.3 Interval Estimation of the Population Mean</td>
<td>4/24/2016</td>
<td>10</td>
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<tr>
<td>24 9.4a Student's t-Distribution</td>
<td>4/24/2016</td>
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</tr>
<tr>
<td>25 9.4b Interval Estimation of the Population Mean: Small Samples, Sigma</td>
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<tr>
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<tr>
<td>26 9.5 Precision and Sample Size: Means</td>
<td>5/1/2016</td>
<td>10</td>
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<tr>
<td>28 17.3a Monitoring with an x-Bar Chart</td>
<td>5/1/2016</td>
<td>10</td>
</tr>
<tr>
<td>29 17.3b Monitoring with an R Chart</td>
<td>5/1/2016</td>
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</tr>
<tr>
<td>30 17.4 Monitoring with a p Chart</td>
<td>5/8/2016</td>
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</table>

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Student Directions – Web based

Important Information
Course ID: UTRGVDBS
School Name: University of Texas - Rio Grande Valley
Instructor Name: Ying Wang
Section Name: 2016 Spring QUMT 2341 - 05

Do NOT purchase a used License Number or Access Code (from other students or online vendors). License Numbers and Access Codes are registered to the original purchaser only.

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   a. Select the option to Purchase an Access Code.
   b. Fill out the form with your information.
   c. Click Submit to receive your personalized Access Code.
   d. Copy and paste or type your Access Code into the New User Setup page.

2. Fill out the form with your information or confirm the preloaded information.

3. Set your password, time zone, and security questions.

4. Add a profile image.
Enroll in Your Course
Select your instructor and section from the drop-down menus and click Enroll.
You are now ready to complete assignments for this course!

Explore Your Course
Watch the Video Tour located under the profile menu to learn more about Hawkes.

1. The Dashboard includes your course information and the mini To-Do List.
2. The To-Do List shows you when you need to complete homework or take a test.
3. The Navigation Toolbar contains links to important tools such as your grades, eBooks, the notifications center, and messages.

Complete Your Homework
Each lesson involves three phases: Learn, Practice, and Certify. Use Learn and Practice to learn the concepts and work out practice problems. When you feel confident in the material, move to Certify to complete your homework.
For additional help, go to http://www.hawkestv.com to watch videos on every lesson.

Get Help
If you have any questions about registering your email address and password, enrolling in your course, or using the site, please contact Hawkes Technical Support.

Phone: 800.426.9538
Phone Hours: Monday - Friday, 8:30am - 10:00pm ET

Online Chat Support: http://www.hawkeslearning.com/chat
Chat Hours: 24 hours a day, 7 days a week

Technical Support Email: support@hawkeslearning.com