STEM Division

MATH 2342-43293, 3 Credit Hours
Introductory Statistics

[Spring 2015]

Classes are every other day
Classes meet 2:06 pm to 3:36 pm
Room 127

Instructor:
Terry LaPrade

Contact Information:
Office: Bishop Lynch High School
Office Hours: Before school or by appointment
Phone: 214-324-3607 ext. 4319 or ext. 4118
Email Address: Terry.LaPrade@bishoplynch.org

Course Description:
This course is a study of the presentation and interpretation of data, probability, sampling, correlation and regression, analysis of variance and the use of statistical software. This course is cross-listed as MATH 2442. The student may register for either MATH 2342 or MATH 2442, but may receive credit for only one of the two. (3 Lec.)

Prerequisite:
Two years of high school algebra and an appropriate assessment test score or Developmental Mathematics 0093 or Developmental Mathematics 0099.

Textbook and Other Course Materials:
Students are required to have access to a graphing calculator for this course. While other models may be acceptable, the TI-83 and TI-84 calculators are strongly preferred. Instructions on how to use technology to apply concepts are at the end of relevant sections under the heading “Technology Step-by-Step.”

Student Learning Outcomes:
After completing this course, the student should be able to:
1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
Course Objectives:
After completing this course, the student will be able to:
1. Collect and tabulate data.
2. Tabulate data and form bar charts and graphs.
3. Calculate measures of central tendency.
4. Determine measures of variability for a set of data.
5. Calculate z-scores, standard deviation and other applications associated with the normal curve.
6. Find the correlation coefficient between test variables
7. Interpret the correlation between test variables.
8. Understand the characteristics of random samples and calculate the estimated standard error.
9. Understand and apply the theory of probability.
10. Identify and apply appropriate parametric tests.
11. Identify and work applications problems from a variety of fields.

Grading Policy:  
<< Describe criteria for arriving at grades >>

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Tests ( including Projects)</td>
<td>50%</td>
</tr>
<tr>
<td>Daily ( including quizzes and classwork)</td>
<td>25%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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</tbody>
</table>

Grading Rationale: << For example 90—100 A, etc >>

90 – 100 ...........A  
80 – 89 ............B  
70 – 79 ...........C  
60 – 69 ............D  
< 59 ...............F

Final Examination: Students will take Eastfield’s final exam. The exam will be either May 14th or 16th.

Policy on Missed Tests and Assignments: If a student misses a test, the student will have one week to make the test up either at a time that we can agree or a Friday during math dept. make ups.  NO MAKE UPS WILL BE DURING CLASS UNLESS IN EXTREME SITUATIONS!!!

Hours:  7-8:15 am  
3:45-5:00 pm

Attendance Policy:
1) You are expected to regularly attend all classes in which you are enrolled. Students have the responsibility to attend class and to consult with the instructor when an absence occurs. If the student knows in advance that a class will be missed for a field trip, athletic event, or a family trip, it is the student’s responsibility to obtain all assignments from the teacher and have all work, including tests, completed and handed in before the class is missed. Failure to do so will result in an M for the missing material. You will then
have one week from the day you get back to get your work completed. Failure to do this will result in a 0 and the work cannot be made up.

If the student misses a class due to illness or other unplanned absence, then he or she must obtain the assignment missed on the first day back to school. You may email me or check my web page (if it is updated). You have one week from that day to turn it in.

If a student is unable to complete a course (or courses) in which he/she is registered, it is the responsibility of the student to withdraw from the course by the appropriate date. (The date is published in the academic calendar each year and in each semester’s class schedule). If a student does not withdraw, he/she will receive a performance grade, usually a grade of “F”.

Students who are absent from class for the observance of a religious holiday may take an examination or complete an assignment scheduled for that day within a reasonable time after the absence if, not later than the 15th day of the semester, the student notified the instructor(s) that the student would be absent for a religious holiday. Sec. 51.911 TX Educ. Code.

Obtaining Final Course Grades Using eConnect:
Final grade reports are no longer mailed. Convenient access is available online at www.econnect.dcccd.edu. Use your student identification number when you log into eConnect, an online system developed by the DCCCD to provide you with timely information regarding your college record. Your grades will also be printed on your Students Advising Report, which is available in the Admissions Office.

Drop Date:
Last date to drop with a grade of “W” is April 27th

Drop Policy:
To drop a class or withdraw from the college, students must follow the prescribed procedure. It is the student’s responsibility to drop or withdraw. Failure to do so will result in receiving a performance grade, usually grade of “F”. No drop or withdrawal requests are accepted by telephone. Students who drop a class or withdraw from the College before the semester deadline receive a “W” (Withdraw) in each class dropped. The deadline for receiving a “W” is indicated on the academic calendar and the current class schedule. If you are unable to complete this course, you must withdraw from it by April 27th. For more information, contact the Admissions/Registrar’s Office at 972-860-7167 (Room C 119.)

STOP BEFORE YOU DROP
Six Drop Rule: For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career, unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information on the 6 drop rule, you may access: https://www1.dcccd.edu/6drop.

Financial Aid:
If you are receiving Financial Aid grants or loans, you must begin attendance in all classes to be certified as attending class. In a Distance Learning Class, you must show participation in the class prior to the certification date by either e-mailing your instructor or logging on to eCampus. Do not drop or stop attending any class without consulting the Financial Aid Office. Changes in your enrollment level and failing grades may require that you repay financial aid funds. Failure to contact the instructor will result in your name being submitted to the Financial Aid Office as a “non-attendee”. Student who fail to attend or participate after the drop date are also subject to this policy.
**Repeating This Course:**
Effective for Fall Semester 2005, the Dallas County Community Colleges will charge additional tuition to students registering the third or subsequent time for a course. All third and subsequent attempts of the majority of credit and Continuing Education/Workforce Training courses will result in additional tuition to be charged. Developmental Studies and some other courses will not be charged a higher tuition rate. Third attempts include courses taken at any of the Dallas County Community Colleges since the Fall 2002 Semester. See Third Attempt to Enroll in a Course at: http://www.dcccd.edu/thirdcourseattempt/

**Students With Learning, Mental and Physical Disabilities:**
Students requesting accommodation due to the presence of a disability must identify themselves in a timely fashion and demonstrate/document the need for accommodations through the Disability Services Office (DSO). For information regarding the rights and responsibilities of students with disabilities, contact DSO at (972) 860-8348 voice/TDD or email efcdso@dccc.edu.

**Student Email:**
Legal privacy issues prevent your instructor from discussing your work or your grades on commercial e-mail accounts. If you wish to send your papers as attachments to an e-mail (and the instructor permits it), or if you have a question about your grade, you must open a student e-mail account. You may set up your account by going to http://www.dcccd.edu/netmail/home.html. The account is free.

**Standard of Conduct/Classroom Etiquette:**
No food, drinks or tobacco products are allowed in Eastfield College classrooms. However; if your class is in a non-lab classroom your instructor may allow for food or drink.

**CODE OF STUDENT CONDUCT:** Web site address: http://www1.dcccd.edu/cat0506/ss/code.cfm

**Responsibility**
Each student shall be charged with notice and knowledge of the contents and provisions of the District’s policies, procedures, and regulations concerning student conduct. All students shall obey the law, show respect for property constituted authority, and observe correct standards of conduct. In addition to activities prohibited by law, the following types of behavior shall be prohibited.

**Scholastic dishonesty** shall constitute a violation of these rules and regulations and is punishable as prescribed by college policies. Scholastic dishonesty shall include, but not limited to, cheating on a test, plagiarism, and collusion.

“Cheating on a test” shall include:

- Copying from another student’s test paper
- Using test materials not authorized by the person administering the test.
- All forms of academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, plagiarism, and collusion.
- Collaborating with or seeking aid from another student during a test without permission from the test administrator.
- Knowingly using, buying, selling, stealing, or soliciting, in whole or in part, the contents of an unadministered test.
- The unauthorized transporting or removal, in whole or in part, of the contents of the unadministered test.
- Substituting for another student, or permitting another student to substitute for one’s self, to take a test.
- Bribing another person to obtain an unadministered test or information about an unadministered test.

“Plagiarism” shall be defined as the appropriating, buying, receiving as a gift, or obtaining by any means another’s work and the unacknowledged submission or incorporation of it in one’s own written work.
“Collusion” shall be defined as the unauthorized collaboration with another person in preparing written work for fulfillment of course requirements.

Students should be aware of disciplinary actions for all forms of academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, plagiarism, and collusion. Your College Catalog and the DCCCD Catalog contain the entire Student Code of Conduct. In this course, you will receive a grade of “0” on that particular assignment or test if you are guilty of cheating on assignments, tests, or plagiarism. Please do not put yourself in a situation that would result in such action. Academic dishonesty is a serious offense in college.

Campus Police:
In addition to providing general law enforcement on campus, the campus police respond to all emergencies. In any emergency situation, you can get immediate help by any of the following methods:
- call 911 on any campus extension
- use any red phone in the hallways, or any "blue light" call box in the parking lots
- call 972-860-4290 from any off campus extension

Sexual Harassment:
Eastfield College has a zero tolerance policy on sexual harassment. All students shall report complaints of sexual harassment informally to the college Human Resources Director or formally to the Vice Chancellor of Educational Affairs.

DCCCD Emergency Operation Procedures:
Visit http://video.dcccd.edu/rtv/DO/emergency_dcccd.wmv

Emergency & Inclement Weather Procedures:
In case of emergency (which may include power or air conditioning outages, fires, etc.) or inclement weather conditions, Eastfield students should listen to KEOM-FM Radio Station (88.5) as the primary media source. In partnership with the Mesquite Independent School District, Eastfield College Administration will notify KEOM immediately after a decision is made to cancel classes on any given day of inclement weather or for emergency purposes. Students may also monitor other local radio and television stations. The earliest an announcement may be broadcast on KEOM Radio is 6 a.m. Students may also refer to the Eastfield College web page www.eastfieldcollege.com for the Inclement Weather announcement under News/Features.

Family Educational Right and Privacy Act of 1974 (FERPA):
In compliance with the Family Educational Rights and Privacy Act of 1974 (FERPA), the College may release information classified as “directory information” to the general public without the written consent of the student. Directory information includes: (1) student name, (2) student address, (3) telephone numbers, (4) date and place of birth, (5) weight and height of members of athletic teams, (6) participation in officially recognized activities and sports, (7) dates of attendance, (8) educational institution most recently attended, and (9) other similar information, including major field of student and degrees and awards received. Students may protect their directory information at any time during the academic year. If no request is filed, directory information is released upon written inquiry. No telephone inquiries are acknowledged. No transcript or academic record is released without written consent from the student, except as specified by law.

ADDITIONAL RESOURCES
The Math Spot (http://www.eastfieldcollege.edu/as/Mathspot/index.asp) provides tutoring in Mathematics and Developmental Mathematics. Students are encouraged to take advantage of this service for additional help in their course work. The Math Spot is located in room C-201, and the phone number is 972-860-7062. Visit the link above for more information on tutors, hours of operation and policies.

EXEMPLARY EDUCATIONAL OBJECTIVES IN INTRODUCTORY STATISTICS
Introductory Statistics (Math2342), as part of the Core Curriculum satisfies the following exemplary educational objectives as set forth by the Texas Higher Education Coordinating Board:
Core Curriculum Intellectual Competencies:
Critical Thinking: Critical thinking embraced methods of applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies. Problem solving is one of the applications of critical thinking, used to address an identified task.

Component Area of Mathematics
The objective of the mathematics component of the core is to develop a quantitatively literate college graduate. Every college graduate should be able to apply basic mathematical tools in the solution of real-world problems. The exemplary educational objectives are the following course objectives:
C1. To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations.
C2. To represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically.
C3. To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments.
C4. To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.
C5. To interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.
C6. To recognize the limitations of mathematical and statistical models.
C7. To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understanding the connections to other disciplines.

The following math courses include the above exemplary educational objectives: Math 1314, 1316, 1324, 1325, 1332, 1333, 1348, 1414, 1425, 2305, 2415, 2318, 2320, 2342, 2412, 2414, 2418, 2420, 2413 or 2442 or higher level math.

COURSE COVERAGE:

<table>
<thead>
<tr>
<th>Sections</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 – 1.6</td>
<td>Practices of statistics, Observational and experimental studies, Sampling, The design of an experiment</td>
</tr>
<tr>
<td>2.1 – 2.4</td>
<td>Qualitative and quantitative data, Additional displays, Misrepresentation of data</td>
</tr>
<tr>
<td>3.1 – 3.5, 4.1-4.2</td>
<td>Measures of central tendency, Measures of dispersion, Grouped data, Measures of position, Outliers</td>
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<tr>
<td>5.1-5.6</td>
<td>Scatter diagrams, Correlation, Regression line, Probability rules, Addition and complement rules, Independence and multiplication rules</td>
</tr>
<tr>
<td>6.1-6.2; 7.1-7.3</td>
<td>Random variables, Binomial probability distribution, Normal distribution, Standard normal distribution, Applications, Assessing normality, Normal approximation to the binomial probability distribution</td>
</tr>
<tr>
<td>8.1; 9.2-9.4</td>
<td>Distribution of the sample mean, Confidence interval for the mean when the population standard deviation is known and unknown, Confidence interval for the standard deviation, Putting it all together</td>
</tr>
<tr>
<td>10.1, 10.3-10.5, 13.1-13.2</td>
<td>Language of hypothesis testing, Hypothesis testing for the mean and the standard deviation, Putting it all together, ANOVA, Post Hoc ANOVA</td>
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Children on Campus
The institution strives to protect an environment most conducive to teaching and learning for all enrolled students. Children who are taking part in organized scheduled activities or who are enrolled in specific classes are welcomed. Minor children, however, should not be brought to the institution unless closely supervised by their parent. Minor children should not be
brought into classrooms, laboratories or other facilities of the college. This practice is disruptive to the learning process. In the case of an emergency where the student-parent has no alternative but to bring the child to campus, classroom faculty or the administrative heads of other units have full discretion as to whether a child may be allowed to quietly stay in the location. These individuals may require that children be removed by the student-parent from the setting if, in their opinion, the presence of the child is deemed to be disruptive to the learning process. For reasons of security and child welfare the institution will not permit unattended children to be left anywhere on the premises. Parents who have problems with childcare should visit the Counseling and/or Advisement Center to receive referrals to childcare services in the area.

**SYLLABUS REVISION:**
The guideline in this syllabus may be changed, deleted, or amended any time by the instructor. The attached course outline is intended as an aid in helping you know your responsibilities for the semester. It is possible that some changes in the course outline or class policies will be made during the semester. Any changes that are made to the class policies or course outline will be announced in class.

Revised: 7/26/2012