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Phone #: (773)907-4085  

Office Hours:  

<table>
<thead>
<tr>
<th>DAYS</th>
<th>ADVISEMENT OFFICE HOURS</th>
<th>WALK-IN OFFICE HOURS</th>
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<tr>
<td>Monday &amp; Wednesday</td>
<td>8:30 - 9:00 AM &amp; 11:30 AM - 12:00 PM</td>
<td>2:00-3:30 PM</td>
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<td>Thursday</td>
<td>3:45-4:45 PM</td>
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MML Website Address: www.coursecompass.com  
MML Course ID: shuaibi00846

The Truman College Mission Statement: Our Mission dedicates us to deliver high-quality, innovative, affordable, and accessible educational opportunities and services that prepare students for a rapidly changing and diverse global economy.

Class Time and Place: Monday & Wednesday 12:00 - 1:45 PM, Room #: 3975.  
Prerequisite: A grade of C or better in Mathematics 99 or appropriate placement test score or consent of department chairperson.  
Contact & Credit Hours: Four hours per week, for sixteen weeks for four (4) credit hours. The instructor is also available for consultation during conference hours.  
Length of Course: 16 weeks.  
Student the Course is Expected to Serve: This course is intended for students who are liberal arts majors and require a general education mathematics course for their undergraduate degree or for students whose programs require introductory statistics such as nursing.  
Course Description: Basic concepts of statistics and applications; Data analysis with the use of EXCEL; theoretical distributions; sampling distributions; problems of estimation; test of hypothesis; problems of sampling theory; linear regression and correlation.  
Other Materials: Students are required to have a graphing calculator TI-83 Plus/TI-84 Plus. For several class projects, you are expected to use the statistical software, MS EXCEL.  
MML & Internet Resources:  
The textbook used for this course is bundled with MyMathLab (MML) software. MyMathLab is a text-specific, easily customizable online courses for textbooks in Mathematics and Statistics. MyMathLab provides a rich and flexible set of course materials, featuring free-response exercises correlated directly to the textbook that instructors can assign for online homework, quizzes, and tests. These exercises regenerate algorithmically for unlimited practice and mastery, and in homework and practice modes, each exercise is accompanied by an interactive guided solution and sample problem. MyMathLab provides students additional with multimedia resources, such as video lectures, animations, and an eBook, to independently improve their understanding and performance.
If you bought your textbook at Beck’s Bookstore, you should have automatically received MyMathLab access code. If you bought your textbook elsewhere, you may not have MyMathLab access code. You should be able to purchase a code online at http://www.mymathlab.com.

The rationale for including MML is to enrich your experience learning statistics both inside and outside of the classroom and to give you every possible opportunity to do well. MML provides you with a wonderful tool to support your learning on a 24/7 basis. It is always there for you no matter what your schedule. It is there to help you to reinforce concepts introduced in the classroom. Consider MML as your virtual tutor. Online class work, homework and quizzes/tests will be assigned throughout this course. You will get immediate feedback on each homework problem, and incorrectly worked problems can be repeated (with a new version of the problem provided by the computer) until a correct solution is obtained. Tips and examples are available online for each problem, in addition to the help available from your instructor and the Tutoring Center. Online Assignments may be done at any location with an internet access. Do not wait till the last hour to start and complete online assignments because a computer glitch may prevent you from accessing your account. Additional MML resources are available such as Video lectures, PowerPoint Presentations, Immediate grading and feedback, Access to tutors (at 1-888-777-0463 or tutors@aw.com) and Access to technical assistance (at 1-800-677-6337).

Course Objectives:

1. To teach students statistical methods in descriptive statistics.
2. To enrich students’ knowledge with basic laws of probability and distributions that can be used in the solution of real-life problems.
3. To provide students with methods of statistical inference.
4. To demonstrate how statistical principles and methods can be applied in social sciences, business, nursing, and applied health fields.
5. To provide students with the skills necessary to pursue further studies in mathematics education, or related fields.
6. To provide lab opportunities for students to place strong emphasis on understanding the concepts of statistics, with graphing calculators, Excel, and statistical softwares.

Student Learning Outcomes:
Upon the completion of the course, students will be able to:

1. Demonstrate knowledge and appropriate use of statistical terms.
2. Organize data using frequency distributions and to represent the data in frequency distributions graphically.
3. Interpret data presented in tabular forms and graphical forms.
4. Interpret information using the measures of central tendency, measures of variation, and measures of position from a contextual-based (real-world) scenario.
5. Apply the rules of probability to a contextual (real-world) situation.
6. Construct a probability distribution for a discrete random variable.

7. Compute the mean, variance, and standard deviation of a discrete probability distribution, and to compute binomial probabilities.

8. Demonstrate knowledge of the properties for a uniform distribution, and normal distribution.

9. Apply the normal distribution to a contextual (real-world) situation.

10. Apply the Central Limit Theorem to a contextual (real-world) situation (i.e. use the central limit theorem to solve problems involving sample means for large samples).

11. Demonstrate knowledge of terms related to interval estimation such as: point estimate, confidence interval, confidence level, margin of error, and critical value.

12. Compute a confidence interval or minimum sample size needed for the population mean or population proportion.

13. Demonstrate knowledge of terms related to hypothesis testing such as: null and alternative hypotheses, significance level, rejection (critical) region, critical values, P-values, types of statistical tests, test statistic (test value), and type I and II errors.

14. Perform a hypothesis test for the population mean or population proportion.

15. Demonstrate knowledge of terms related to correlation and regression such as: correlation coefficient, regression line, Explained variation, Unexplained variation, Total variation, coefficient of determination, the standard error of estimate, and the prediction interval.

16. Find the regression line, predicted value, and the prediction interval.

**General Education Goals:**
This course addresses the following TR General Education Goals:

- The student performs effectively in the workplace and has the ability to work and make effective use of wide variety of current technologies. (Gen. Ed. Goal 2)

- The student demonstrates the ability to think critically, abstractly, and logically. (Gen. Ed. Goal 4)

- The student gathers, interprets, and analyzes data. (Gen. Ed. Goal 5)

- The student demonstrates the ability to work independently. (Gen. Ed. Goal 6)
Class Operation:

1. Homework: **Reading the relevant sections in your textbook is always expected.** Homework assignments will be collected every week. The quizzes will be based on the homework problems and additional worksheets. Students who keep up the daily work are generally those who do well on quizzes and tests. Always check the answers in the back of the book and prepare to ask questions in class. You are encouraged to work together with other students on homework problems.

2. Website & Blackboard: It is your responsibility to check my [Website & the Blackboard](#) regularly for announcements and other important information regarding the course.

3. Online Assignments: Some of the homework assignments and quizzes are online assignments which are created using MyMathLab software. These assignments are automatically graded. Online homework exercises include guided solutions and sample problems to help students understand and master concepts.

4. Projects & Tests: Throughout the semester, we will have at least 4 Projects that are based on Microsoft Excel 2003. Also, there will be two exams during the semester besides the final exam. The final exam is cumulative, and it will be given during the last week of the semester.

Policies:

- **Participation policy**: Class participation is mandatory. You are expected to attend most of the class sessions. If you have any question, be ready to ask it at the beginning of the class. The average student should plan two hours of out of class time for each hour of class. Some students need more time than this.

- **Make-up Policy**: No make-up exam is given without prior notification and documented acceptable excuse. The student must contact the instructor by telephone or e-mail on the day of the exam if there is a problem. If you know in advance of an unavoidable absence, arrangements can be made to take a test prior to the absence.

- **Attendance Policy**: Students must attend most of the class sessions. They are expected to be there ON TIME. Attendance will be taken daily. If you miss a class, it is your responsibility to obtain the assignment and find out what material was covered.

- **Mathematics Department Active Pursuit of Course Objectives & ADW Policy**: Students are not actively pursuing the course objectives and will be administratively withdrawn (ADW) at midterm if at least two of the following apply:
  1. Less than 70% of assignments up to the midterm have been completed.
  2. Less than 70% of quizzes and tests up to the midterm have been attempted.
  3. Less than 50% of class sessions up to the midterm have been attended.

- **Cell Phones/Beepers policy**: Electronic devices cause disruption during class and are not permitted. In order to respect the learning environment, please turn off all such items prior to class.
Academic Support & Computer Labs:
http://www.trumancollege.cc/studentservices/tutoring (Tutoring Center)
http://www.trumancollege.cc/studentservices/tutoring/currentschedule.pdf (Schedule)
http://www.trumancollege.cc/studentservices/ssli (Student Services)
http://www.trumancollege.edu/trio. (Trio Program)

Computer Labs: Room 3817; Room 3186; Room 2247; Room L112; Room L933

Students with Disabilities
The Disability Access Center (DAC) is located in room 1428. This is the Center, responsible for verifying that students have a disability-related needs for academic, accommodations and for planning appropriate accommodations, in cooperation with the students themselves and their instructors. Students who need academic accommodations should request them from the DAC Center. 773-907-4725 Linda Ford Director Office hours are from 9:00 a.m.- 7:00 p.m. Monday-Thursday & Friday 9:00 a.m. 4:00 p.m.

Truman College Academic Integrity Policy: If the alleged violation of the Academic Integrity policy occurs in the classroom, the instructor will determine if a student has committed an act of academic dishonesty. The instructor may take action commensurate with the severity of the act. The instructor may:

1. Assign a grade ‘F’ or ‘0’ to the assignment or test or appropriate part of the assignment or test.

2. Make a proportional reduction in the grade for an entire assignment, if the assignment is a part of a large assignment.

3. Assign a grade ‘F’ for the course. “See the student Handbook for specifics”.

Types of Activities: There will be an emphasis on active and cooperative learning strategies throughout this class. Active Learning is, in short, anything that students do in a classroom other than merely passively listening to an instructor’s lecture. This includes everything from listening practices which help students to absorb what they hear, to short writing exercises in which students react to lecture material, to complex group exercises in which students apply course material to “real life” situations and/or to new problems. Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Some of the class Active/Cooperative learning strategies are listed below. Think-Pair-Share, Student Summaries, One-Minute Paper, Roundtable, Muddiest Point, Corners and Shared Brainstorming.
Weekly Schedule:

1. [Aug 22-Aug 26]: An Overview of Statistics(1.1), Data Classification(1.2)[Optional], Frequency Distribution Their Graphs(2.1).

2. [Aug 29-Sep 02]: More Graphs and Displays(2.2), Measures of Central Tendency(2.3).

3. [Sep 05-Sep 09]: Measures of Variation(2.4), Measures of Position(2.5). 
   **[September 05: Labor Day Holiday]**

4. [Sep 12-Sep 16]: Basic Concepts of Probability(3.1), Conditional probability and Multiplication Rule(3.2), The Addition Rule(3.3).

5. [Sep 19-Sep 23]: Counting Principles(3.4), Probability Distributions(4.1), Binomial Distribution(4.2).

6. [Sep 26-Sep 30]: Introduction to Normal Distributions and the Standard Normal Distribution(5.1).  **[Review & Exam I]**


8. [Oct 10-Oct 14]: Normal Approximations to Binomial Distributions(5.5), Confidence Intervals for the Mean (Large Samples)(6.1).


10. [Oct 24-Oct 28]: Introduction to Hypothesis Testing(7.1), Hypothesis Testing for the Mean(Large Samples)(7.2).

11. [Oct 31-Nov 04]: Hypothesis Testing for the Mean(Small Samples)(7.3), Hypothesis Testing for Proportions(7.4), Hypothesis Testing for Variance and Standard Deviation(7.5)[Optional], Testing the Difference Between the Means (Large Independent Samples)(8.1)[Optional].

12. [Nov 07-Nov 11]: Testing the Difference Between Means (Small Independent Samples) (8.2)[Optional], Testing the Difference Between Means (Dependent Samples)(8.3)[Optional].  **[Review & Exam II]**

13. [Nov 14-Nov 18]: Testing the Difference Between Proportions(8.4)[Optional], Correlation(9.1), Linear Regression(9.2).


15. [Nov 28-Dec 02]: Multiple Regression(9.4)[Optional], Goodness of Fit(10.1), Independence(10.2).

16. [Dec 05-Dec 09]: **[Review & Final Exam]**


Grading Policy:

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<td>Exam II</td>
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<td>Final Exam</td>
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<td>Online Homework &amp; Online Quizzes</td>
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<tr>
<td>Computer Excel Projects</td>
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<tr>
<td>In-Class Quizzes &amp; Homework Assignments</td>
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Grading Scale:

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<tr>
<th>90-100</th>
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<th>70-79</th>
<th>60-69</th>
<th>0-59</th>
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<td>B</td>
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<td>D</td>
<td>F</td>
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Extra Help!: Many students find that they need extra help in addition to that available in class. Help is available from the instructor at the times indicated or by appointment. Also, recognize that others in the class can and are willing to help. You are encouraged to keep in touch with classmates who have similar schedules. Tutoring is also available at Truman college.

Good Luck
Shuaibi, A.