Math 123 Syllabus for Spring 2013

Three Rivers Community College

Course: Elementary Statistics (MAT 123, T2)

CRN: 12649

Prerequisite: Acceptable placement score or MAT 095.

Location/Times: Room D109 6:30 – 9:15 Wednesdays

Instructor: Gary Hoyt

Office/Hours: D205 (Adjunct offices), 5:45 - 6:15 Wed or by appointment

Email: ghoyt@trcc.commnet.edu

Phone: 860-887-3692 (home)

Course Description: This course considers fundamental concepts of probability and statistics. The topics include exploratory data analysis (tables, graphs, measures of central tendency and dispersion), basic probability, applications of binomial and normal distributions, confidence intervals, hypothesis testing and Chi-Square Goodness-of-Fit Test.

Textbook: Introductory Statistics, 9th Edition. Neil A Weiss. Addison-Wesley, 2012.

Attendance: It is expected that students will make every effort to attend all classes. If it should be necessary to miss a class, the student is responsible for the missed material as well as the assignment that was given.

Homework: Homework will be an integral part of this course. It is essential that you attempt all assignments and that you keep these assignments in a notebook that is dedicated solely to math homework. It will not be possible to reach your potential in this class without doing the homework on a regular basis. It is also recommended that you record the material presented in class in a separate notebook, not mixing pages of homework with pages of notes.

Calculators: A calculator that supports two-variable statistical calculations is required in this class; a TI83 or TI84 is recommended. They will be necessary for many of the homework assignments as well as for the chapter tests. You should bring your calculator to every class.

Cell Phones: Cell phones can not be used as calculators and should not be evident during class. Please turn all cell phones off as you enter the room. If there are extenuating circumstances please see me and we will discuss the matter.

Withdrawal from Class: Students may withdraw in writing at the Registrar's Office. The last day to withdraw from classes this semester is May 13, 2013.

Extra Help: Three Rivers CC offers free tutoring through the Tutoring Academic Success Center (TASC), located in room C-117. Peer tutoring and peer study groups are available. Students may also see me during my regularly scheduled office time of by appointment as well.

Class Cancellation: If school is cancelled, delayed or closing early, announcements will be made on the local radio and television stations. myCommNet Alert is a system that sends text messages and emails to anyone signed up in the event of a campus emergency. Additionally, TRCC sends messages when the college is delayed or closed due to weather. All students are encouraged to sign up for myCommNet Alert. A tutorial is available on the Educational Technology and Distance Learning Students page of the web site.
http://www.trcc.commnet.edu/div_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html

If I find it necessary to cancel class, I will email all of you with as much advance notice as possible. I will use the email addresses that are on my class roster. I will send a test email later today to verify that the college has a valid email address on file. If you do not receive this email you should update your email address. Email addresses can be updated by going to Student Services in the A-1 wing.

Disabilities Statement: Students with a documented disability are provided supportive service and accommodations to assist them with their academic objectives. Services are strictly confidential. Disability services may include individualized accommodations, advising, advocacy, counseling, technical assistant and referral information. Accommodations cannot be given unless I receive notification from the Disabilities Counseling Service (383-5240). It is the student's responsibility to secure this assistance where appropriate.

If you have a disability that may affect your progress in this course, please meet with a Disability Service Provider (DSP) as soon as possible. Please note that accommodations cannot be provided until you provide written authorization from a DSP.

TRCC Disabilities Service Providers Counseling & Advising Office Room A-119	
Matt Liscum (860) 383-5240	• Physical Disabilities • Sensory Disabilities • Medical Disabilities • Mental Health Disabilities
Chris Scarborough (860) 892-5751	• Learning Disabilities • ADD/ADHD • Autism Spectrum

Instructor Discretionary Days: None are scheduled for this semester.

Academic Honesty: Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person's ability to succeed in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. In this class and in the course of your academic career, present only your own best work and act at all times with honor.

Quizzes and Tests: There will be four quizzes and four unit tests as well as a final exam in this course. **All tests must be taken at the regularly scheduled time.** A missed test will result in a grade of a 0 for that test unless **extremely** extenuating circumstances are **proven** to be present. Anyone who feels that such circumstances exist (causing them to miss a test) needs to communicate that to me as soon as possible. Please do not miss a test unless it is absolutely unavoidable.

Grading Procedure: Each quiz will be worth 50 points and each unit test will carry a weight of 100 points. The final exam will be worth 200 points and attendance will be worth 100 points with a 7 point reduction being taken for every class that is missed (for example: miss three classes and the grade for attendance will be an 79). There will be a total of 900 points available for the semester. Your final grade will be the percentage of points earned compared to the total (900) points available.

CLASS AVERAGE	FINAL GRADE
90 – 92 / 93 - 100	A- / A
80 – 82 / 83 – 86 / 87 – 89	B- / B / B+
70 – 72 / 73 – 76 / 77 – 79	C- / C / C+
60 – 62 / 63 – 66 / 67 – 69	D- / D / D+
Below 60	F

COURSE OUTCOMES

1. Construct and interpret graphs (histograms, bar graphs, stem and leaf plots) and tables (frequency and relative frequency) for sets of data.

2. Calculate and interpret 3 measures of center (mean, median and mode) and select the appropriate measure of center to use for the set of data presented.

3. Calculate and interpret 3 Measures of Dispersion (range, standard deviation and five-number summary) then select the appropriate Measure of Dispersion to use for the data presented.

4. Solve and interpret word problems using the z score to measure relative position(s).

5. Understand and use the definition of probability and the basic rules of addition, multiplication and counting to solve probability word problems.

6. Understand and use contingency tables to solve probability word problems.

7. Understand and apply the appropriate probability distribution (binomial, standard normal or normal) needed to solve probability word problems.

8. Explain what the Central Limit Theorem is and how it is used in Inferential Statistics.

9. Determine appropriate sample sizes necessary for estimating population means.

10. Understand and develop confidence intervals for estimating population means.

11. Understand and use Hypothesis Testing to test a claim about a population mean.

TENTATIVE CLASS SCHEDULE

W	1/30	Variables and Data, Organizing Qualitative Data	2.1, 2.2, 2.3
W	2/6	Distribution Shapes, Measures of Center and Variation, Boxplots	2.4, 3.1, 3.2, 3.3
W	**2/13**	Descriptive Measures for Populations; Use of Samples, **Test # 1**	3.4
W	2/20	Probability Basics, Events, Some Rules of Probability	4.1, 4.2, 4.3
W	2/27	TBA	
W	3/6	Contingency Tables, Multiplication Rule, Counting Rules	4.4, 4.6, 4.8
W	**3/13**	Discrete Random Variables, Mean and Standard Deviation, Binomial Distribution, **Test # 2**	5.1, 5.2, 5.3

March 18 - March 24 Spring Break - No Classes

W	3/27	Normal Distributions, Area Under the Curve	6.1, 6.2, 6.3
W	4/3	Normal Approximation to Binomial, Sampling Error, Mean and Standard Deviation of Sample Mean	6.5, 7.1, 7.2
W	**4/10**	The Sample Distribution of the Sample Mean, **TEST # 3**	7.3
W	4/17	Estimating a Population Mean, Confidence Intervals (σ known), Margin of Error, Confidence Intervals (σ unknown)	8.1, 8.2, 8.3, 8.4
W	4/24	Hypothesis Testing, Critical Value Approach, P-Value Approach	9.1, 9.2, 9.3
W	5/1	Hypothesis Testing with σ Known and with σ unknown	9.4, 9.5
W	**5/8**	**Test # 4,** Review for exam	
W	5/15	**FINAL EXAM**	