

## Math 167 Syllabus for Spring 2015

### Three Rivers Community College

**Course:** Principles of Statistics (MAT 167, T3)

**CRN:** 10777

**Prerequisite:** Acceptable placement score or MAT 137.

**Location/Times:** Room E227 6:30 – 9:15 Thursday

**Instructor:** Gary Hoyt

**Office/Hours:** D205 (Adjunct offices), 5:30 - 6:30 Thursday

**Email:** [ghoyt@trcc.commnet.edu](mailto:ghoyt@trcc.commnet.edu)

**Course Description:** . This course introduces the basic concepts of statistics as they apply primarily to business, the technologies, and the social sciences. The topics include: methods of summarizing data, measures of central tendency and dispersion, correlation and linear regression, basic probability, binomial and normal distributions, hypothesis testing for one or two populations, confidence intervals, and distributions.

**Textbook:** Elementary Statistics, 12<sup>th</sup> Edition. Mario F. Triola. Pearson Education, 2014.

**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 strongly 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 should 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 11, 2015.

**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.comnet.edu/div\\_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html](http://www.trcc.comnet.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.

<b>TRCC Disabilities Service Providers</b> Counseling & Advising Office Room A-119	
<b>Matt Liscum</b> (860) 383-5240	<ul style="list-style-type: none"><li>• Physical Disabilities</li><li>• Sensory Disabilities</li><li>• Medical Disabilities</li><li>• Mental Health Disabilities</li></ul>
<b>Chris Scarborough</b> (860) 892-5751	<ul style="list-style-type: none"><li>• Learning Disabilities</li><li>• ADD/ADHD</li><li>• Autism Spectrum</li></ul>

**Instructor Discretionary Days:** There are no instructor discretionary days.

**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.

**Tests:** There will be three unit tests and 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 unit test will carry a weight of 100 points and the final exam will be worth 200 points. Attendance will be worth 50 points with a 5 point reduction being taken for every class that is missed (for example: miss three classes and the points earned for attendance will be 35). There will be a total of 550 points available for the semester. Your final grade will be the percentage of points earned compared to the total (550) points available.

<u>CLASS AVERAGE</u>	<u>FINAL GRADE</u>
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 histograms, stem leaf plots, and frequency tables for sets of data.
2. Find mean, median, mode, range, standard deviation, deciles, and quartiles.
3. Calculate linear correlation coefficient; find equation of regression line and use equation to predict values.
4. Apply the basic rules of addition, multiplication, and counting. Find conditional probability.
5. Construct contingency tables and use to find probabilities.
6. Determine if data satisfies a probability distribution.
7. Know when to use the binomial distribution, standard normal distribution, or a normal distribution as an approximation to a binomial distribution.
8. Know when to apply the Central Limit Theorem.
9. Determine confidence intervals for means and proportions and find sample sizes necessary for statistical analysis.
10. Perform appropriate hypothesis tests.

**Learning portfolios and assessment:** All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios.

### **TENTATIVE CLASS SCHEDULE**

TH 1/22	Introduction, Types of Data, Frequency Distributions and Histograms	1.2, 1.3, 2.2, 2.3
TH 1/29	Measures of Center and Variation, Measures of Relative Standing, Boxplots	3.2, 3.3, 3.4
TH 2/5	Professional Day – Classes not in Session	
TH 2/12	Review and <b>TEST #1</b>	
TH 2/19	Basic Probability, Addition Rule	4.2, 4.3
TH 2/26	Multiplication Rule, Complements, Conditional Probability, Counting	4.4, 4.5, 4.6
TH 3/5	Review and <b>TEST #2</b>	
TH 3/12	Probability Distributions, BPD, $\mu$ , $\sigma$ , and $\sigma^2$ of BPD	5.2, 5.3, 5.4
TH 3/19	Spring Break – Classes not in Session	
TH 3/26	The Standard Normal Distribution, Applications of Normal Distributions	6.2, 6.3
TH 4/2	The Central Limit Theorem, Review and <b>TEST #3</b> (take home)	6.5
TH 4/9	Normal as Approximation to Binomial, Estimating a Population Proportion	6.7, 7.2
TH 4/16	Estimating a Population Mean, Basics of Hypothesis Testing	7.3, 8.2
TH 4/23	Testing a Claim About a Proportion, Testing a Claim About a Mean	8.3, 8.4
TH 4/30	Thanksgiving Break – No classes.	
TH 5/7	Inferences About Two Proportions, Inferences About Two Means	9.2, 9.3, 9.4
TH 5/14	<b>FINAL EXAM</b>	