Principals of Statistics Spring 2014 **MAT*K167**

11992 Τ4 MW 3:30 pm – 4:45 pm E 204

INSTRUCTOR: Dr. Kelly Molkenthin (pronounced "molk-in-tine") Office: C 234, 860-215-9455 Email: kmolkenthin@trcc.commnet.edu Mondays: 11:00 am - 12:00 pm Office Hours: Tuesdays: 1:00 pm – 2:00 pm Wednesdays: 10:00 am - 11:00 am Thursdays: 1:00 pm – 2:00 pm and by appointment. ****** *******

REQUIRED MATERIAL:

- Elementary Statistics, 12th Edition. Mario F. Triola. Pearson Prentice Hall, ISBN # 978-0-321-83696-0 You can purchase a hardcover book with MyStatLab or just the electronic access kit.
- MyStatLab access code
- Calculator that supports 2-variable statistical calculations (preferably the TI-83 or TI-84).

RECOMMENDED MATERIAL:

- Three ring binder with dividers
- CALCULATORS: Calculators will be needed for many homework problems and it is REQUIRED that you bring one to each class and every quiz. Cell phones may NOT be used as calculators. It is highly recommended that you have a TI-83 or TI-84.
- COMPUTERS: Online homework will be assigned regularly and will be completed using MyLab and Mastering at http://pearsonmylab.com. If you did not purchase a book which has an access code bundled with it, you will have to purchase an access code separately. To register with MyLab, you will need the following information:

Course name: Principles of Statistics – Spring 2014

Course ID: molkenthin08678

Go to the above website and click on the tab Student under "Register". Be sure you have a valid email address, course ID and either an access code or credit card. Then click on "OK! Register now >". Enter the course ID (see above) then click on Continue. If you already have a Pearson account (you've used MyLab or Course Compass before), enter your user name and password and click "Sign In". If you do not yet have a Pearson account, click on "create" under "Create a Pearson Account". Be sure to remember/record your user name and password. Forgetting your user name and/or password is NOT a valid reason for not completing assignments. If you do not have an access code, you can purchase one now with a credit card by clicking on Pay with a credit card or PayPal under Enrollment Options. If you have an access code (inside the cover of a new textbook, or purchased separately), you are ready to register, so click "access code" under "Select an Option". Enter your six word access code when prompted, click Next, and follow the prompts to create your own login name and password. After you have registered, return to the above website and you can now log in. Go to the Welcome Page, click on your course, and then choose the Installation Wizard link to make sure your computer has the required set-up and plug-ins. Technical support for the company is at 1-800-677-6337, Monday through Friday, 9 am – 6 pm.

GRADING:	3 Exams: Final Project: Final Exam (cumulative): Weekly Quizzes: MyLab Attendance and Participation:	 225 points (75 points each) 150 points 100 points 150 points (15 points each) 100 points 50 points
	Total:	775 points

Your final grade is the total number of points you have received divided by the total possible number of points you could have earned. Final grades will be determined using the scale below:

$\textbf{A} \rightarrow 93\%$ and above	A- → 90 - 92%	
$\mathbf{B+} \rightarrow 87 - 89\%$	$\mathbf{B} ightarrow 83$ - 86%	B- → 80 - 82%
$C+ \rightarrow 77$ - 79%	$\mathbf{C} ightarrow 73$ - 76%	C- → 70 - 72%
${f D}{f +} o 67$ - 69%	$D \rightarrow 63 - 66\%$	$D- \rightarrow 60-62\%$

EXTRA CREDIT: There will be no "extra credit" assignments for this course.

ATTENDANCE: Attendance is required and will be taken for each class. An absence is excused ONLY for valid reasons (to be determined by the instructor) and if notification is given **PRIOR** to a missed class (via email, phone message – **not** word of mouth from another student). **All absences reported by phone or reported to instructor in person **must** be followed up with an email, or they will be considered unexcused. Oversleeping and "colds" are examples that are **not** valid reasons for an absence. Do you best to not miss ANY classes!! Excused absences will not affect your attendance and participation grade, unexcused absences will lower your attendance and participation grade. Students are allowed a maximum of 2 excused absences per semester.

<u>Also, if you miss a class it is **YOUR** responsibility to get the class notes from another student (refer to your class list) and **BE PREPARED** for the next class meeting (this includes taking the scheduled tests/quizzes).</u>

Note: Class BEGINS at 3:30 pm. It is expected that you will be in your seat and ready to go at 3:30 pm. Students arriving after 3:30 pm will lose attendance points for that class. Excessive "lateness" will not be tolerated, it is disruptive to both the instructor and the class. Excessive lateness will result in classroom doors being locked at 3:30 pm.

CLASS CANCELATION: In the unlikely event that a class needs to be canceled by the instructor, a notice will be placed on the classroom door prior to the start of class. If time permits, you will be notified by the instructor via email as soon as possible prior to the canceled class.

For college cancelations, pay attention to the radio & TV announcements, call the college's main phone number, 860-886-0177, or visit the college's home page, <u>www.trcc.commnet.edu</u>. It is also suggested all students register for <u>The myCommnet Alert Notification System</u>. This system is used to deliver important information to students, faculty, and staff regarding weather-related class cancellations. The system delivers both email messages, and text messages over cellular phones to those individuals who are registered. To register, log on to your myCommnet account at <u>http://my.commnet.edu/</u> and follow the link to myCommnet Alert.

HOMEWORK AND QUIZZES: Homework (both from the text and online) will be assigned for every section we cover in the text. It is expected that you complete the online assigned problems by the due date and time on the assignment, and the homework in the text by the next class meeting.

<u>For the online homework</u>: For most assignments, you will have one week from the date in which the assignment was posted to complete your assignment for **full credit**. Once due dates have passed, assignments will remain open until the day of the exam which covers that material. This will give you the opportunity to complete any missed problems for ½ **credit**. **Note: Deadlines for online homework will not go beyond the exam date for the exam that covers that material. All online assignments MUST be completed prior to taking the exam on that material. Watch your MyLab due dates carefully. All assignments are due by 11:59 pm on due dates.

<u>For text homework</u>: Keep a separate notebook for your text homework. It is expected homework from your text is completed, or at least reasonably attempted, by the next class meeting. BE SURE TO CHECK YOUR ANSWERS IN THE BACK OF THE TEXT. If you check the problem in the back of the text and it is not correct, re-do the problem. If you are struggling with the assignment, you need to seek out help either from your instructor or the tutor center ASAP!

Our expectation is that you are spending 2-3 hours of reading and doing homework for this class for every "academic" hour we meet in class. We meet 3 "academic" hours per week, therefore you should expect to spend *at least* 6 - 9 hours per week working on material for this class outside of our class meetings, every week!

***NOTE:** Class time is reserved for presentation of material. Homework questions will be answered outside class meetings.

Your in-class quizzes will be testing the concepts emphasized from class that week and your homework assignments. Make-ups for quizzes will be given in <u>extreme situations</u> and if arrangements are made with the instructor **prior** to the class meeting in which the quiz takes place. If you miss a class in which a quiz is given, DO NOT assume you will automatically be able to make up the quiz, it must be approved by the instructor. All make-ups must be completed before the next class meeting after the given quiz. Make-ups for quizzes will not be given if the absence on the quiz date is not an excused absence. You have 14 scheduled quizzes throughout the semester, only your top 10 scores will count toward your final grade.

- **STUDENT EMAILS:** Students are required to have a valid email. If it is necessary for me to email the entire class, I will use the "email class" prompt in MyStatLab, so be certain your email is current under your settings in MyStatLab.
- **EXAMS**: You will have three online (regular) exams and one online final exam. Once any exam is opened, it needs to be completed in that sitting. ALL online exams are due at 3:30 pm on the due date, although the three regular exams will not actually close until 11:59 pm on due dates. Your entire (regular) exam MUST be complete prior to 11:59 pm on the scheduled due date. I HIGHLY suggest not waiting until several hours prior to the due date/time to start your exam (perhaps you can "pretend" it is due the night before!). If you experience technical difficulties prior to 3:30 pm on the day the exam is due, let me know *immediately* via email or in our scheduled class meeting and we will fix the problem. If you experience technical difficulties after 3:30 pm on the day the (regular) exam is due, you need to resolve the issue on your own, if resolvable, and in either case accept the resulting grade.

** The Final Exam is due at 3:30 pm on 5/21, and WILL NOT remain open until midnight. Online exams **cannot** be reopened. Keep this in mind and plan accordingly.

Exams are scheduled to open on the following dates:

- Exam #1: opens Wednesday 3/5, 4:45 pm, due Monday 3/10, 3:30 pm
- ◆ Exam #2: opens Wednesday 4/9, 4:45 pm, due Monday 4/14, 3:30 pm
- Exam #3: opens Wednesday 5/7, 4:45 pm, due Monday 5/12, 3:30 pm
- ◆ Final Exam: opens Friday 5/16, 5/21 pm, due Wednesday 12/18, 3:30 pm

This <u>may</u> change (but hopefully not), depending on how we are doing. No exam will be administered prior to the date/time of the scheduled exam and **if you miss an exam, you will receive a grade of 0** (zero). No exam will be opened past the due date/time.

Any student with a 93% or higher average at the end of the session (this includes three exams, top ten quizzes, project, MyLab and attendance points) is exempt from the final exam and will receive a final grade of an A.

COMMUNICATION: Verbal communication with the instructor regarding missed classes, quiz make-ups, special accommodations, etc. **must** be followed up with an email (<u>kmolkenthin@trcc.commnet.edu</u>) as soon as possible. This is essential!

RETENTION OF PAPERS: Students are expected to retain all graded work until final grades are received.

- ACADEMIC DISHONESTY: Academic integrity is essential in all aspects of college coursework and learning. I have zero tolerance for academic dishonesty. It is expected that YOU complete all your assigned homework and project. Communication or collaboration of ANY sort is ABSOLUTEY PROHIBITED during any quiz or exam. Academic Misconduct is punishable in a number of ways, including a score of a zero on the assignment where the cheating took place, a grade of an F in the course and/or possible censure on your permanent record. All cases of academic dishonesty will be referred to the Academic Honor Council. Do not let yourself come under the suspicion of academic dishonesty.
- **COURSE OBJECTIVES**: The objective of this course is to provide you with a basic understanding of statistical concepts. You will learn how to organize and analyze data, design samples, compute and analyze correlation and regression lines, compute and analyze confidence intervals and perform hypothesis tests. Emphasis is placed on the **analysis**, not just the computations.

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; fine 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.
- **DIGICATION STATEMENT:** 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.
- ACCOMMODATIONS: Students with learning disabilities should contact the Learning Specialist, Chris Scarborough at 860-892-5751 or <u>cscarborough@trcc.commet.edu</u> as soon as possible to ensure timely accommodations. Students with physical disabilities should contact Judy Hilburger at 860-383-5420 or via email at <u>jhilburger@trcc.commnet.edu</u> or Matt Liscum at 860-383-5420 or via email at <u>mliscum@trcc.commnet.edu</u> to facilitate accommodations. All testing/quizzing accommodations MUST be discussed with the instructor in a timely manner, that is, *at least* one to two class meetings prior to any scheduled test/quiz for which accommodations are needed.

- **CELL PHONE POLICY**: All cell phones must be turned OFF or MUTED before entering the classroom and properly placed in a bag or pocket (not left on a desk). Any cell phone ringing or beeping during a class is inappropriate and unacceptable. Any and all cell phone use during class is also inappropriate and will not be tolerated. Students found using cell phones in any way in class will be asked to leave and will lose their attendance points for that class period. Cell phones may NOT be used for calculators in class.
- **ACCEPTANCE POLICY**: After reading this syllabus, choosing to stay registered for this course exemplifies your acceptance of the syllabus and all policies and consequences outlined in the syllabus, If you do not agree with any of the terms in the syllabus, you are free to withdraw.
 - **The key to success in this course is to attend every class and do all the homework when it is assigned. Ask questions when you have them, either in class or in my office. You will find it much easier to learn the new topics if you consistently keep up with the course material and homework problems!**

Week of:	Chapter(s):	Topics Covered:
1/27	1.1 - 1.4	Introduction to Statistics, Types of Data, Collecting Data
2/3	2.1 - 2.4	Frequency Distributions, Histograms, Statistical Graphs
2/10	3.1 – 3.4	Measures of Center, Measures of Variation, Measures of and Relative Standing, Boxplots Quiz #3– Wednesday 2/12
2/17	10.1, 10.2	No classes Monday 2/17 – Presidents Day! Correlation ♦ Quiz #4 – Wednesday 2/19
2/24	10.3, 4.1, 4.2	Regression, Basic Concepts of Probability ◆ Quiz #5 – Wednesday 2/26
3/3	4.3	No MAT 167 Monday 3/3 – Instructor out of town Addition Rule ◆ Quiz #6 – Wednesday 3/5 ◆ Exam #1 Opens Wednesday 3/5 (Ch 1, 2, 3), 4:45 pm
3/10	4.4, 5.1, 5.2	 Exam #1 due Monday 3/10, 3:30 pm Multiplication Rule, Probability Distributions Quiz #7 – Wednesday 3/12
3/17		Spring Break!!
3/24	5.3, 5.4, 6.1, 6.2	Binomial Distribution, Standard Normal Distribution ◆ Quiz #8 – Wednesday 3/26
3/31	6.3 - 6.5	Applications of the Normal Distribution, Sampling Distributions, The Central Limit Theorem ◆ Quiz #9– Wednesday 4/2
4/7	7.1, 7.2	Estimating a Population Proportion ◆ Quiz #10 – Wednesday 4/9 ◆ Exam #2 Opens Wednesday 4/9 (Ch 10, 4, 5, 6), 4:45 pm
4/14	7.3, 8.1, 8.2	 Exam #2 due Monday 4/14, 3:30 pm Estimating a Population Mean, Basics of Hypothesis Testing Quiz #11 – Wednesday 4/16
4/21	8.3	Testing a Claim about a Proportion, Testing a Claim about a Mean ◆ Quiz #12 – Wednesday 4/23
4/28	9.1, 9.3	Two Means: Independent Samples ◆ Quiz #13 – Wednesday 4/30
5/5	9.2, 9.4	Two Proportions, Two Dependent Samples (Matched Pairs) ◆ Quiz #14 – Wednesday 5/7 ◆ Exam #3 Opens Wednesday, 5/7 (Ch 7, 8, 9), 4:45 pm ◆ Project Due Friday 5/9, NOON, for potential "A" students
5/12		 Exam #3 due Monday 5/12, 3:30 pm Catch-up, Review, Project Work ALL projects due by Friday 5/16, NOON! Late projects NOT accepted – NO EXCEPTIONS!9.4
5/19		♦ Final Exam Opens Friday 5/19, 12:00 pm ♦ Final Exam Due Wednesday 5/21, 3:30 pm

The instructor has the right to change/modify this syllabus at any time with proper notification to the class