MATH-1442: Statistics for Life
Department of Mathematics and Statistics
Spring 2015

A. COURSE INFORMATION

Course number/section: MATH-1442-002
Class meeting time: MW 5:30–6:45 PM
Class location: CI-138
Course Website: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: George Tintera
Office location: CI 303
Office hours: TBD
Telephone: 361-825-6028
e-mail: George.tintera@tamucc.edu
Appointments: send email

C. COURSE DESCRIPTION

This is an introduction to statistical methods used in the physical, life and social sciences. Topics covered include: Statistical Thinking, Descriptive Statistics, Basic Probability Concepts, Sampling & Data Collection, The Normal Distribution, Confidence Intervals, Hypothesis Testing, Correlation & Simple Linear Regression, Categorical Data Analysis, and ANOVA.

D. PREREQUISITES AND COREQUISITES

MATH 0399 or placement beyond MATH 0399; also non-remedial status in Reading and Writing as determined by placement testing or THEA.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

- MyLabsPlus access kit is required for homework and quizzes. You will need to purchase an access code, either through the campus bookstore or directly from the publisher. Historically, the publisher has been less expensive, I recommend checking both sources before buying. Access codes purchased elsewhere will not work and cannot be refunded. I will discuss how you access and use MyLabsPlus during the first class meeting. An electronic version of
the textbook, *Elementary Statistics* by Mario F. Triola, 12th edition, is included inside the MyLabsPlus system.

- You will be required to access the TAMU-CC Blackboard system at <bb9.tamucc.edu>. If you do not have access to Blackboard, please contact the Help Desk (see <it.tamucc.edu> for contact info) to obtain access as soon as possible.
- The lab manual for the lab portion of this class will be provided online using Blackboard.

**Optional Textbook(s) or Other References**

- JMP software (JMP Pro®, Version 10.0.0, Copyright © 2012 SAS Institute Inc., Cary, NC) will be provided in the Lab and does not need be purchased unless you intend to work on labs at home. There is a user guide at http://www.jmp.com/support/help/.
- I also recommend the tutorials available at the help menu in JMP.

**Supplies**

A calculator is required for every quiz and examination. A TI-83/84 calculator or similar is recommended but not required (it may make this class more manageable).

**F. STUDENT LEARNING OUTCOMES AND ASSESSMENT**

By the end of this course, students should be able to:

1. Students will be able to use descriptive statistics and graphical exploration to summarize key features of data.
2. Students will be able to perform elementary probability calculations, primarily with the normal distribution and including applications of the Central Limit Theorem.
3. Students will be able to calculate confidence intervals and perform hypothesis tests of the following forms: one and two sample t-tests, Chi-square test, ANOVA, and linear regression.
4. Students will be able to determine an appropriate statistical analysis, given data and a research question.
5. Students will be able to interpret the results of all calculations and statistical tests in the context of the processes that generate that data, and will be able to express these interpretations clearly in writing.

6. Students will be able to use appropriate technology tools to perform needed calculations and tests.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Methods for instruction include the following:

- Lecture.
- Demonstrations.
- Use of computer resources, including statistical software, spreadsheets, and the Internet for data location, data organization, and data analysis.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Final course standing will be based upon several homework, quizzes, two semester tests, Labs and a final test.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Semester Exams</td>
<td>40</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10</td>
</tr>
<tr>
<td>Homework</td>
<td>15</td>
</tr>
<tr>
<td>Labs</td>
<td>15</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
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Final grades will be assigned as follows

<table>
<thead>
<tr>
<th>Weighted average in %</th>
<th>LETTER GRADE</th>
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<tbody>
<tr>
<td>90 - 100</td>
<td>A</td>
</tr>
<tr>
<td>80 – 89.99</td>
<td>B</td>
</tr>
<tr>
<td>70 - 79.99</td>
<td>C</td>
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<tr>
<td>60 – 69.99</td>
<td>D</td>
</tr>
<tr>
<td>Bellow 60</td>
<td>F</td>
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I. COURSE CONTENT/SCHEDULE

- See the class Blackboard page for more details.

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
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<tbody>
<tr>
<td>Week 1-6 Jan 21 –Mar 1</td>
<td>Exam 1</td>
<td>Chapter 1 through Chapter 5</td>
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<tr>
<td>March 16 - 22</td>
<td>SPRING BREAK – NO CLASS</td>
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<tr>
<td>Week 7-12 April 6 - 12</td>
<td>Exam 2</td>
<td>Chapter 6 through Chapter 8</td>
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<tr>
<td>Friday, April 10th</td>
<td>Deadline for Dropping a Course with a Grade of W</td>
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<td></td>
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<tr>
<td>Tuesday, May 12th</td>
<td>Final Exam</td>
<td>Comprehensive exam (covers all the materials we cover during the semester)</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COURSE POLICIES

Attendance/Tardiness
Attendance will be taken each class. Talking during class time and tardiness are often disruptive to the whole class and are not appreciated. If you are delayed and arrive late please do so quietly. Excessive tardiness, disruptive talking, disruptive behavior or performing activities not related to the class will be counted as absences. The instructor is NOT responsible for informing absent students what was covered in previous classes, homework or any other announcements.

Late Work
Late work will result a 20% deduction for every question. Absolutely no exceptions!!!

Cell Phone Use
Please turn off cellphones before class.

Laptop Use
Students are welcome to use their laptops in class only if it is intended for learning purposes like log in to the class blackboard page, or mylabsplus website.

**Missed Exam**

There will be no makeup for a missed semester test unless for special circumstances. If the midterm test is missed, its score will be replaced by the score on the final exam. The opposite is not true. A missed final exam will result on a score of 0 points. The midterm exam grade can be replaced by the final exam grade if the latter is a better grade.

**Participation**

Students are encouraged to participate in class discussions and problem solving skills.

**Others**

- Students are expected to read the PowerPoints materials in Blackboard, view videos and other multimedia available in MyLabsPlus, and work assignments before the due dates.
- Homework is assigned online regularly through MyLabsPlus that can be accessed at tamucc.mylabsplus.com (you need to buy an access code) and due as specified. Late homework will result a 20% deduction for every questions not done on time. If you have problems to access the system you have to let me know as soon as possible.
- There is an online quiz immediately after each chapter is finished.
- Two semester tests will be administered during class times. The dates will be announced in class and posted on Blackboard. These dates may be changed with due notice announced during class time. Calculators may be used but cannot be shared. Cell phones cannot be used as calculators.
- The final exam will be a comprehensive examination over all material covered during the semester. Absolutely no early final examination, so make travel arrangements accordingly. Without taking final exam, it will be an “F” for the semester grade regardless.

**K. COLLEGE AND UNIVERSITY POLICIES**

- **Academic Integrity (University)**

  It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals
who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior.
See Full University Policy at:
http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity

- **Academic Honesty**: University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) For the complete statement in the university catalog, follow the link: http://catalog.tamucc.edu/content.php?catoid=10&navoid=313%23Academic_Integrity#Academic_Honesty

- **Deadline for Dropping a Course with a Grade of W (University)**
The grade of W will be assigned to any student officially dropping a course by **Friday, April 10, 2015**. No student is eligible to receive a W without completing the official drop process by this deadline. Visit the Office of the University Registrar for the Course Drop Form that must be submitted. After April 10, 2015 a student will not be allowed to drop a course.

- **Grade Appeals (College of Science and Engineering)**
As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at
http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science
and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- Disability Services
  Disability Services (DS) is the hub for coordinating services and accommodations to ensure accessibility and utilization of all programs for all Texas A&M University-Corpus Christi students with disabilities. Our services are designed to meet the unique educational needs of enrolled students with documented permanent or temporary disabilities. DS provides intake and consultation services to students seeking to register with our office. DS reviews an individual’s documentation of disability and assesses eligibility for services and the determination of reasonable accommodations. For more information visit the Disability Services Office at 116 Corpus Christi Hall or go to http://disabilityservices.tamucc.edu/

L. OTHER INFORMATION
Help: CASA has many quality tutors to help you while you need someone beside my office hours. Welcome to visit those tutors at the second floor of library. Please find out their schedule first before you make a plan to go for this semester. I will be happy to work with you anytime during my office hours and also email me for your special needs. Good luck to everyone in the class.

GENERAL DISCLAIMER
I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.