Syllabus Math 1342 Elementary Statistical Methods  
Fall 2015

Math 1342-020 10:00-10:50 MWF

Instructor: Dr. John Gresham  Office: Math Building 131  
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Web: faculty.tarleton.edu/jgresham  Office hours: 1-2 MTWR,

Catalog Description: Data collection and analysis, elementary probability, discrete and continuous distributions, regression, correlation, estimation, and nonparametric methods. Credit cannot be awarded for both MATH 1342 and MATH 3450. Prerequisites: Enrollment in this course will be in accordance with the Mathematics Placement and Continuing Enrollment Rules.

Textbook & Materials: Choose one of the following options
- Statistics, Twelfth Ed., by McClave and Sincich with MyMathLab
- Purchase a registration code online at www.pearsonmylab.com. Once registered you can use the course ID to access your assignments, ebook (a copy of the textbook), and other resources. You may purchase a hard copy separately, if you wish.

MyMathLab Course ID:

| Math 1342-020 | 8:00-8:50 MWF | gresham57769 |

You are strongly advised to use your Tarleton email account as your email address when you register in MML. See the University email policy below. Be sure to register for your section. Failure to register for your correct section will lower your MML average.

Student Learning Outcomes:

At the conclusion of the course the student will be able to:

1. Evaluate probabilities, expectation, and standard deviation involving discrete and continuous random variables to solve applied problems.
2. Interpret and construct graphical representations of data sets and related summary statistics to analyze real world problems.
3. Construct confidence intervals and formulate and test statistical hypotheses involving population means and proportions.
4. Estimate the parameters of simple linear regression models and apply them to practical problems.

Major Tests: We will have three (3) chapter exams during the semester and a comprehensive final at the end of the semester.

Grading System:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>3 Major Exams</td>
<td>45%</td>
</tr>
<tr>
<td>Class worksheets/quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>MML Online homework</td>
<td>20%</td>
</tr>
<tr>
<td>Comprehensive Final</td>
<td>20%</td>
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Grading Scale: 90 – 100 A  80 – 89 B  70 – 79 C  60 – 69 D  0 – 59 F
**MML Homework:** On-line homework will be assigned as topics are covered; you will have at least two days to complete each assignment. Failure to complete the assignment on time will result in a grade of 0 for that assignment. A few of these grades may be dropped at the end of the term.

**Class Worksheets/Quizzes:** Worksheets provided by the instructor may be given in class as part of the class learning activities. Or a short class quiz may be given over the material covered. A few of these grades may be dropped at the end of the term.

**Makeup Policy:** Students may request make-up consideration for valid and documented reasons such as illness, death in the immediate family, legal proceedings, or participation in University-sponsored activities. In the event that you are absent not for reasons outlined above, you will receive a grade of 0. Additionally, the final exam may replace one low major exam grade, provided that the score on the final is better.

**University Email Policy:** Your university email address is now the official means of electronic mail communication. Personal email addresses will no longer be used to contact students. According to Tarleton State University's Email Communication Guidelines, "official communications will be sent to the recipients' official University email address. Students are expected to check their email on a frequent and consistent basis..." If you have not claimed your Tarleton email account, please contact the Computer Helpdesk at (254) 968-9885 as soon as possible.

**University Policy:** Students are responsible for knowing and abiding by the policies and information contained in the Tarleton Student Handbook. [See the TSU Student Handbook]

**Student Responsibilities:** The student is solely responsible for:
- Completing each assignment by the specified due date.
- Obtaining assignments and other materials for classes from which they are absent.
- Utilizing, as needed, all available study-aid options (including meeting with the instructor, referring to outside texts, etc.) to resolve any questions that they might have regarding homework, course material, and/or projects.
- Giving as much of an effort as it takes to pass this course.

**Academic Conduct:** Any student guilty of academic dishonesty, cheating, or plagiarism in academic work shall be subject to disciplinary action. [TSUSH] The instructor may initiate disciplinary action in any case of academic misconduct. In the case of cheating on an exam, a grade of zero shall be assigned to the exam, and this score may not be replaced by the final exam score in calculating the semester average.

**Services for Students with Disabilities:** It is the policy of Tarleton State University to comply with the Americans with Disabilities Act and other applicable laws. If you are a student with a disability seeking accommodations for this course, please contact the Center for Access and Academic Testing, at 254.968.9400 or caat@tarleton.edu. The office is located in Math 201. More information can be found at www.tarleton.edu/caat or in the University Catalog.

**Attendance Policy:** Regular and punctual class attendance is expected of all students. If excessive absences prevent satisfactory progress, a recommendation for withdrawal from the course may be made.

**Drop Policy:** Students will not be allowed to drop a freshman DGS, ENGL, or MATH course until after mid-semester except with the approval of their Dean. The last day for dropping courses is identified in the University Calendar.
Cell phones: Students are expected to set their cell phone so as to emit no audible noise in the classroom. Except for emergency situations, cell phone use (including texting) during the class period is prohibited. A student who is noticeably (to the instructor) distracted by his/her cell phone and/or distracting others with it may be asked to immediately disable it or to leave the classroom. To compensate for your electronic deprivation, keep your calculator on.

Calculator Policy: Each student will be required to have an approved graphing calculator available for use. The TI-84 is my recommended choice, but other TI models (TI-nspire [non CAS], TI-83, TI-83+, TI-86, etc.) or other brands are acceptable. The TI-83/84 series are the most user-friendly for statistics use. I will use primarily the TI-84 in the classroom. Students using other brands are responsible for learning how to operate their calculators. The instructor reserves the right to prohibit the use of calculators on certain assignments or tests. A limited number of calculators are available for rent from the Math Club. Students should see the Math Office (MATH 142) for more information.

Study Aids:
- The Mathematics Clinic offers to all students enrolled in developmental and freshman-level mathematics courses an opportunity to obtain free tutoring. The Math Clinic is located in room 203. Its hours are posted on the door.
- The university offers several programs through which students may obtain free or reduced-fee private tutoring. Interested students should visit Student Success Services for more details.
- The department maintains a list of students that are interested in tutoring privately, which may be accessed via the department’s web page.

Notes:
- In the event that the university is closed for a scheduled class time, whatever was scheduled for that day and/or whatever was due that day will be scheduled and/or due on the next scheduled class time. In the event that the university is closed for a scheduled class time, whatever was scheduled for that day and/or whatever was due that day will be scheduled and/or due on the next scheduled class time. University closure and emergency information is sent to all students, faculty, and staff through Code Purple. All students are automatically enrolled in Code Purple through their Tarleton email address. See http://www.tarleton.edu/codepurple for more information.

All items contained in this syllabus are subject to change as the semester progresses. Students will be notified of any changes.
### Course Calendar (subject to change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter/Topic</th>
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| 1    | 1 Statistics, Data, and Statistical Thinking  
      | 2.1 Describing Qualitative Data  
      | 2.2 Graphical Methods for Describing Quantitative Data  
      | 2.3 Summation Notation |
| 2    | 2.4 Numerical Measures of Central Tendency  
      | 2.5 Numerical Measures of Variability  
      | 2.6 Interpreting the Standard Deviation |
| 3    | 2.7 Numerical Measures of Relative Standing  
      | 2.8 Methods for Detecting Outliers  
      | 3.1 Events, Sample Spaces, and Probability |
| 4    | 3.2 Unions and Intersections  
      | 3.3 Complementary Events  
      | 3.4 The Additive Rule and Mutually Exclusive Events  
      | 3.5 Conditional Probability  
      | 3.6 Multiplicative Rule and Independent Events |
| 5    | 4.1 Two Types of Random Variables  
      | 4.2 Probability Distributions for Discrete Random Variables |
|      | **Test I** Chapters 1-3 |
| 6    | 4.3 Expected Values of Discrete Random Variables  
      | 4.4 The Binomial Random Variable |
| 7    | 5.1 Continuous Probability Distributions  
      | 5.2 The Uniform Distribution  
      | 5.3 The Normal Distribution |
| 8    | 6 Sampling Distributions and the Central Limit Theorem |
| 9    | 7.1 Identifying the Target Parameter  
      | 7.2 Confidence Interval for a Population Mean: Normal (z) Statistic |
|      | **Test II** chapters 4-6 |
| 10   | 7.3 Confidence Interval for a Population Mean: Student’s t-Statistic  
      | 7.4 Large-Sample Confidence Interval for a Population Proportion |
| 11   | 8.1 The Elements of a Test of Hypothesis  
      | 8.2 Formulating Hypotheses and Setting Up the Rejection Region |
| 12   | 8.3 Test of Hypothesis about a Population Mean: Normal (z) Statistic  
      | 8.4 Observed Significance Levels: p-Values |
| 13   | 8.6 Large-Sample Test of Hypothesis about a Population Proportion  
      | 11.2 Fitting the Model: The Least Squares Approach |
| 14   | **Test III** chapters 7, 8  
      | 11.5 The Coefficients of Correlation and Determination |
| 15   | Review for Final |

**Final Exam** – Monday, December 7, 2015  3:00-5:30pm

See the University Academic Calendar for all exam times  
[http://catalog.tarleton.edu/undergrad/universitycalendarsandfinalexaminationschedules/](http://catalog.tarleton.edu/undergrad/universitycalendarsandfinalexaminationschedules/)