MIS 301
Fall—2013
Schedule Number—21977

COURSE INFORMATION and SYLLABUS

Class Days: Mondays
Class Times: 4:00-6:40pm
Class Location: EBA-437
Office Phone: 619-594-6845
Office Location: Student Services East: SSE-3443

Professor: James R. Beatty, PhD, CCP, SPHR
Contact Information: jbeatty@mail.sdsu.edu
Office Hours: M (2:15-3:30); T (5:15-6:30)
Other Hours: By prearranged appointment
Course Design: Primarily Lecture and PowerPoints

Course Overview

Catalog Description

MIS 301. Statistical Analysis for Business. Statistical methods applied to business decision making. Prerequisites: Mathematics 120; Economics 201 or Statistics 119. Approved upper division business major, business minor, or another major approved by the College of Business Administration.

BSBA Goals and MIS 301 Student Learning Objectives

Undergraduate students in the College of Business Administration can earn a Bachelor of Science in Business Administration (BSBA) degree. The BSBA program goals for the College of Business Administration focus on what the student will have achieved upon graduation. They are defined as follows:

- Effective Communicators
- Critical Thinkers
- Able to Analyze Ethical Problems
- Global in their perspective
- Knowledgeable about the essentials of business

MIS 301 contributes to the accomplishment of these goals through student learning outcomes (SLOs). The SLOs for MIS 301 are stated below. At the end of this course, students should be able to:

SLO 1: Formulate hypotheses for decision making and research.
SLO 2: Select appropriate statistical tools for examining and analyzing data.
SLO 3: Collect and use appropriate data from samples to make inferences about populations.
SLO 4: Check, validate, and subsequently analyze data using appropriate statistical techniques.
SLO 5: Apply probability theory in decision making situations.
SLO 6: Follow ethical practices in the interpretation of data, statistical analyses, and graphics.
SLO 7: Present statistical results using graphics, text, and the spoken word.

Enrollment Information, Required Prerequisites, Adding and/or Dropping the Course

Proof of completion of prerequisites required: Copy of transcript. The university catalog provides the following descriptions for these prerequisites:


Plus one of the following two courses:
STAT 119. Elementary Statistics for Business (3 units). Prerequisite: Satisfaction of the Entry-Level Mathematics requirement. Course description: Measures of central tendency and variability, frequency distributions; probability, Bayes theorem, probability distributions (including binomial, hypergeometric, and normal), sampling distributions, confidence intervals, significance testing, regression and correlation.

or:


Adding or Dropping the Course

Adding the Course. Obtain an Add Code from the instructor of the class you are adding. You will need the schedule number that is given in the online class schedule AND the Add Code given by the instructor. Log on to the registration system in the SDSU WebPortal by the schedule adjustment deadline, and follow the instructions given. Warning: An Add Code can be used only once, so for your own protection, it should not be shared with others. Using an Add Code without the proper authorization from the instructor will result in disciplinary action. Adding the course will only be allowed by permission from the instructor. The priority used to select students from the crash list is solely based on the number of units completed and/or transferred into San Diego State University and used by the university to count toward graduation requirements.

Dropping the Course. Log onto the registration system in the SDSU WebPortal by the schedule adjustment deadline, and follow the instructions. This is an important date, so be sure you are aware of it.

Course Materials and Support

Required Materials. The required course materials are as follows:


HP-17bII+ financial calculator

Students are expected to bring Statistical Methods to class on a regular basis, as well as the HP-17bII+ calculators. The calculators will be used throughout the course.

Recommended Materials. At a minimum, students should have access to Microsoft PowerPoint, Word, and Excel. They are encouraged to use the most current versions of these software programs. If a student does not have or cannot afford such software, he or she can use one of the computer labs to download materials, utilize software available on campus, and use Excel macros that may be discussed in class. For students only having access to Mac computers and are not successful in downloading or using instructor-developed materials due to incompatibility, such students are encouraged to use one of PC computers available in the campus labs.

Options for Accessing Course Materials. Required course materials such as books, calculators, and ParScore/Scantron sheets will be available at the SDSU Bookstore. KB Books also carries the course book. Various practice exams and other course materials will be available through Blackboard.
Options for Accessing and Using Other Resources. Some materials will be available on Blackboard such as: a) the course syllabus; b) any syllabus updates; c) any needed updates of PowerPoints; d) practice problems with answers; e) information and guidelines about examinations; f) any required assignments; and g) other materials as deemed appropriate for the course.

The FACTS of the Course

I believe in the importance of Fairness, Accountability, Credibility, and Transparency in all aspects of life, both in theory and in practice, and that they should be interlinked in a Systematic approach—the FACTS. The FACTS apply to work life, student life, personal life, and interpersonal life. In other words, the FACTS can and should be applied anywhere and everywhere. They should be followed in manufacturing, service, small business, health care, government, not-for-profit organizations, education, and elsewhere. These qualities apply to individual activities, one-on-one relationships, group relationships, and across cultural relationships. The FACTS should be standard practice for human resources professionals, financial advisors, quality control experts, attorneys, judges, consultants, marketers, accountants, doctors, and other decision makers. They are also applicable in teaching, learning, and the teacher/student exchange. Such a fair-minded approach is essential for achieving goals and strategies that come out of any set of mission, vision, and value statements. Abiding by the FACTS is also essential for achieving the learning objectives described earlier for this course. To be effective, the four components must be linked together in this Systematic approach. Based on this philosophy, I created the acronym and its corresponding visual to represent the spirit of fair play I hope to promote throughout this course. The visual emphasizes various components of the professor/student exchange. I hope you find this philosophy useful and in alignment with my approach to teaching. I will strive to follow this model in practice throughout the course.

Textbook Details

The required textbook for the course is entitled Statistical Methods. It is published by McGraw-Hill College Custom Series. You will be expected to bring your book to class on a regular basis, especially for the second and third parts of the course. You must bring your book with you for the exams. You will find that there are a number of important appendices in the book, especially Appendices A, C, F, and H. For example, Appendix A contains the answers to all of the practice problems that appear at the end of each of the chapters. Appendix C contains many tables containing critical cutoff values for various statistical tests as well as related probability tables; you will need to have these tables with you for almost every class session of the course. Appendix F includes a number of flowcharts essential for survival in this course, so you will want to have ready access to them. Appendix H may be the most useful appendix in the book, since it consists of instructions on how to set up and use your HP calculator. You will be allowed to use Appendix C and Appendix F during those exams. You cannot borrow any classmate’s book during the exams, and you cannot simply copy Appendix C and Appendix F for use during the exams.

Appendix H includes many equations that can easily be entered into your calculator, making the computational portion of this course much easier and minimizing the need for memorization of equations. I have spent considerable time creating these equations and making them user-friendly. You will be allowed to use the HP-17bII+ on all examinations and thus will have access to these equations (if you have diligently entered them correctly into your calculator). They are copyrighted and designed to correspond with both the book and
the course. I strongly encourage you to insert these equations, without change or modification, into your calculators as soon as possible. I will refer to them throughout the course.

The following is the list of chapters and appendices that appear in Statistical Methods:

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>Title</th>
<th>Notes</th>
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<tbody>
<tr>
<td>1</td>
<td>Problem Solving and Decision Making</td>
<td></td>
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<tr>
<td>2</td>
<td>Exploratory Data Analysis</td>
<td></td>
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<td>3</td>
<td>Measures of Location or Central Tendency</td>
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<td>4</td>
<td>Measures of Variability and Shapes of Distributions</td>
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<td>5</td>
<td>Fundamental Probability Rules</td>
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<tr>
<td>6</td>
<td>The Normal Distribution</td>
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<tr>
<td>7</td>
<td>Discrete Probability Distributions (Chapters 1, 2, 3, 4, 6, 7 plus small part of 5 will be on Test 1)</td>
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<tr>
<td>8</td>
<td>Statistical Inference, Model Design, and Model Selection</td>
<td>(Chapters 8, 9, 10, 12, and 14 will be on Test 2)</td>
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<td>9</td>
<td>One-Sample Tests for Means</td>
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<tr>
<td>10</td>
<td>Two-Sample Tests for Means</td>
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<tr>
<td>11</td>
<td>Tests for Comparing Variabilities</td>
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<td>12</td>
<td>One-Way Analysis of Variance</td>
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<tr>
<td>13</td>
<td>Expanded Analysis of Variance Models</td>
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<tr>
<td>14</td>
<td>Chi-Square Tests (Chapters 8, 9, 10, 12, and 14 will be on Test 2)</td>
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<tr>
<td>15</td>
<td>Correlation</td>
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<tr>
<td>16</td>
<td>Bivariate Regression</td>
<td>(Chapters 15, 16, and 17 will be the bulk of Test 3)</td>
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<tr>
<td>17</td>
<td>Multiple Regression Models</td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX A: Answers to Practice Problems
APPENDIX B: Bibliography
APPENDIX C: Critical Tables
  Table 1: Values under the Standard Normal Distribution
  Table 2: Critical Values for Student's t-Distribution
  Table 3: Critical Values for the Chi-Square Distribution
  Table 4: Critical Values for the F-Distribution
  Table 5: Critical Values for Correlation Coefficients
  Table 6: Fisher's z-Values: Conversions from r to z
  Table 7: Critical Values for Spearman's Rho
  Table 8: Coefficients for the Binomial Distribution
  Table 9: Cumulative Probabilities under the Binomial Distribution
  Table 10: Cumulative Probabilities under the Poisson Distribution for Given Values
  Table 11: Estimated RSQ Shrinkage Values
APPENDIX D: Data Base for Middle Level Managers
APPENDIX E: Summation Notation and other Mathematical Operations
APPENDIX F: Flowcharts for Statistical Decision-Making
APPENDIX G: Greek Alphabet
APPENDIX H: Hewlett-Packard Equation-Solving Routines
APPENDIX I: Independent Study Sample Paper with APA Style Manual Notations
APPENDIX J: JRB Computer Programs: Measurement and Statistical Systems
APPENDIX K: Knowledge and Thought: The History of Science and Statistics

Details about the Calculator

You are expected to bring your calculator to every class session and to use it during the lectures and discussions. You will be allowed to use your calculator during all performance evaluations; if you use it regularly in class, you will be very comfortable using it during examinations. If your calculator breaks down, if the batteries die, or if you forget to bring it on the day of a quiz or test, you will not be allowed to share someone else's (including the instructor's calculator)—so please do not ask. I encourage you to buy spare batteries, read the manual about how
to install the batteries, and have them with you during all class meetings and examinations. It is essential for you to know how to install your batteries before removing the old ones; otherwise, you may lose anything that you have stored in the calculator! You will be expected to use the HP-17BII+ calculator. This calculator has 30,740 bytes of user memory available. By comparison, many calculators have only 6,600 bytes or less of user memory available. Your colleagues will all be using this calculator, and you will find that having the same calculator as your classmates will be beneficial when you are studying for exams, verifying data entry, and doing practice problems. I discuss and explain the use and application of these calculators throughout the course and send you emails or post information about updates and applications. Appendix H Statistical Methods has additional information about these calculators. However, to provide you with continual calculator updates and support, be sure to refer to the version of Appendix H posted on the McGraw-Hill website. It may be posted on Blackboard as well. Because it is kept up-to-date, it is the one you should use and follow.

Details about Computers, Software, and Spreadsheets

You must be able to successfully use Excel in this course, since Excel has rapidly become a significant part of a manager's toolkit. All duly registered students have access to Excel in the computer laboratory, and most have access to Excel at home or work. While Quattro, Lotus, and other spreadsheets are adequate, Excel is far more widely used and owned; thus, we will be using Excel in class. I will provide you supplements for Excel and will demonstrate Excel in class. While you may want access to other computer software such as SPSS, SAS, JMP-IN, Minitab, Statgraphics, MASS, etc., you will not need to purchase one of these more advanced programs to get through the course.

Gaining Access to the PowerPoints, the Excel Files, and Other Materials

You will have access to PowerPoint Presentations for every chapter that we will cover in the course. They have been posted in two versions on the McGraw-Hill website. You must use the access code that comes with your textbook to register and then gain access to the website. Once you do this, you will have access to all the PowerPoints (both in pptx and pdf format), as well as having access to a number of Excel macros I have created to accompany Statistical Methods. The pptx version of the PowerPoints is in color and includes animation. The pdf version does not have color or animation and has two or three slides per page. You do not need both versions. However, if you are Mac user, have an old PC, or have well-outdated software, you may have difficulty opening the Microsoft PC PowerPoints 2010 pptx versions. For example, there continue to be known issues Mac users may have regarding opening PowerPoint pptx versions that are password protected. On the other hand, everyone should be able to open pdf files. Thus, you will have access to all the PowerPoints in one format or another. Of course, in the classroom lectures, I will be using the pptx version, which includes animation. As an option, many students print out the pdf versions and bring them to class so that they can take notes right on the slides.

Setting up your Computer to Store and Access the Course Software

I suggest you create a folder on your computer where you can save, store, and conveniently access all the files needed for the course. The easiest approach for setting up your computer for this course is to first create a folder in your main directory, and name it STATISTICAL METHODS. Then, within the STATISTICAL METHODS folder, create four subfolders and name them as follows:

- PowerPoint Slides
- Pdf Files
- Excel Macros
- Miscellaneous

Within the Miscellaneous subfolder, you can always create your own additional subfolders to include such things as practice programs, test information, this syllabus, etc.
Following Along without Getting Lost

You will always know which chapter we are in and which PowerPoints we will be discussing as we move through the course. You should review the corresponding PowerPoints for upcoming chapters before class. For explanations that go well beyond the PowerPoints and in the lectures, you should turn to the book to fill in the gaps. Remember that although my PowerPoints are rather detailed, they still only give you an overview of the chapters in outline form. The book provides much more detailed information. Previous students have indicated that the PowerPoints are very helpful and serve as their first point of entry for the course. Each PowerPoint chapter concludes with a set of multiple choice problems, with correct answers identified. These problems might be slightly easier than what you might encounter on the examinations; however, they are designed to provide you with a warm-up and get you started. Each chapter of the book also has sets of practice problems, including multiple choice, short answer, and conceptual problems. Using those problems as practice will be very helpful as well. Keep in mind that the answers to all the book problems are given in Appendix A (for Answers) of Statistical Methods. From time to time you will also find additional practice problems posted on Blackboard that will help you prepare for exams. Working the practice problems is entirely up to you but will be very helpful.

Details about Blackboard

We will be using Blackboard throughout the course to supplement the McGraw-Hill website. The following information includes the names of some of the folders that will appear on Blackboard during the duration of the course. For more detailed information, you will need to visit the course’s Blackboard website itself.

Announcements. You will find information about ongoing class matters from time to time when announcements and/or updates need to be made quickly.

Faculty. You will find information about your instructor in this folder.

Syllabus. You will find the Course Syllabus located within the Syllabus folder. You should check this folder periodically to see if anything in the syllabus has changed, including dates for examinations.

Expectations of Oral/Written Communication Skills. The College of Business Administration has developed a set of rubrics to address the expectations of students with regard to both written and oral communications skills. When pertaining to student learning objectives, a rubric is a scoring/grading tool that is generally used for subjective assignments. This folder provides general rubrics for both written and oral communication skills which may be applied to student coursework.

PowerPoint Presentations. This folder contains two subfolders. One contains supplemental PowerPoint slides that may be used in the class, while the other contains pdf versions of the same supplemental PowerPoint slides. Keep in mind that they are copyrighted and password protected, and they are NOT to be shared with anyone who is not currently enrolled in this course, not in this section of the course, and/or is not enrolled this semester.

Calculator Assistance. This folder has two subfolders:

Statistical Methods, Appendix H. This subfolder will contain the most recent version of Appendix H, which may update and replace the version of Appendix H that is in your book. The version found on Blackboard will be the most current one, with the most current equations. It is a "living document" that may continually be revised as new equations are created, as examples are added, and as illustrations of the use of the calculator are enhanced. Again, be forewarned that the material is copyrighted and is NOT to be distributed to others not in this class, either electronically or in any other format. It is with this understanding that I am providing you with copies of the material, and I thank you in advance for following good ethical practice in abiding by these rules.
Testing the Equations. This subfolder contains an Excel document that will help you test your equations after entering them into your calculator. It is password protected and nonfunctional; thus, the contents and cells cannot be modified. However, you can scroll through the Excel workbook to review applications of the corresponding equations. I have attempted to provide illustrations using example data so you can test your equations. After inputting the equations, you should test them for entry accuracy. Almost all of the equations in Appendix H are illustrated here. These illustrations are brief and are designed to help you verify your equations. The concepts must be learned as well. I hope you find these helpful.

Additional Practice and Chapter Help. This folder contains three subfolders, described as follows:

Helpful Hints for Various Chapters. This subfolder contains additional insights and helpful hints about some of the more complex theories and applications.

Additional Practice Problems. This subfolder contains practice problems for various chapters discussed throughout the course. Similar to the many practice problems in the PowerPoints and at the end of each chapter in the book, the practice problems in this subfolder are designed to help you prepare yourself for the examinations. These are "additional" practice problems; therefore, they are not required and will not be graded. Instead, they are for practice, so the decision as to whether to work these problems or ignore them is entirely up to you.

Answers to Additional Practice Problems. This subfolder contains the answers to the posted practice problems. The answers are usually activated a day or so after the actual practice problems become available. This provides you with some lead time for working on the practice problems before looking at the answers.

SDSU Library. This is a link that will give you rapid access to the San Diego State University Library and related resources.

Test Information. This folder will contain information about each of the examinations, once they become available prior to the respective examination.

Test 1 Information. This subfolder will contain the following information: a) Test 1 Study Guide; b) Test 1 Cover Sheet; and c) Test 1 Statement of Commitment to Ethical Standards During Examinations. More information regarding these three documents will be discussed prior to examination time.

Test 2 Information. This subfolder will contain the following information: a) Test 3 Study Guide; b) Test 3 Cover Sheet; and c) Test 3 Statement of Commitment to Ethical Standards During Examinations. More information regarding these three documents will be discussed prior to examination time.

Test 3 Information. This subfolder will contain the following information: a) Test 3 Study Guide; b) Test 3 Cover Sheet; and c) Test 3 Statement of Commitment to Ethical Standards During Examinations. More information regarding these three documents will be discussed prior to the final examination.

Miscellaneous Communication Folder. This folder may or may not contain information and/or subfolders. You should check this folder from time to time, as new information, subfolders, and files may become available.
Details about the Tests and Grading

Equipment Rules During Examinations. You are allowed to use the HP-17bII+ calculator during each of the exams, but you are not allowed to use any other calculator. You must turn off all electronic equipment except for your calculator during the examinations. This includes turning off other calculators, computers, cell phones, iPhones, iPads, Androids, beepers, iPods, Nooks, Kindles, MP3 players, head sets, ear buds, Apps for the HP-17bII+, or any other electronic equipment during the examination that is not required for medical reasons. If there is a medical reason, you must present documentation in advance.

Number and Timing of Exams. There will be three tests administered in the course. The dates for these tests are discussed at the conclusion of this syllabus, but they may be modified depending upon the flow of the course. If the dates are changed, you will be given notice in advance. The exams will be separated by approximately equal time intervals if plausible, with the last test given on the scheduled date for the final examination. Although much of the material to be covered on the examinations will have been discussed in class, students are expected to know and will be held accountable for all of the assigned material in the text. If this syllabus specifically eliminates certain concepts, sections, or chapters from your reading of the materials, you will not be tested over these concepts, sections, or chapters. Each test will be multiple choice, consisting of somewhere between 40 and 55 items. All test items will have five choices or stems (A, B, C, D, and E). The number of test items will depend on the topics to be covered. Anticipate that you will have approximately 2½ minutes to answer each test item, so you will want to work quickly and efficiently.

In order to prepare for the exams, first browse through the assigned chapter for a general overview; then read the chapter for detailed information; then work through the quick quizzes and practice problems; finally, work the multiple choice questions in a format that simulates an exam situation. When working the multiple choice questions at the end of each chapter, allow yourself approximately 2½ minutes per question since that will be similar to the amount of time you will be allotted on an actual examination. Then work through an entire block of 20 multiple choice questions at a time. Allow yourself 50 minutes to complete those test items BEFORE checking the answers in Appendix A. This approach will provide you with a more realistic measure of your comprehension than would be obtained if you were to work a question, check your answer for that question in Appendix A, work the next question, check your answer, etc. It will also check you speed.

Class Work

There will be limited required homework and not extra credit work. I do post practice sets for you to prepare yourself. They will not be required or submitted, and they will be self-graded. I will post answer sets for all practice problems, usually several days after posting the problem sets.

Quality Points

Quality points are determined by a quantitative conversion of test letter grades to points. I will determine letter grade cutoffs for each of the tests separately and independently. Once letter grades have been determined, the raw scores are discarded and are no longer used as part of the grading process. Instead, the letter grades on each of the tests are converted to quality points. This approach is very fair to the students and is used for two reasons: a) Examinations rarely have the same number of questions; and b) this approach gives all students an equal chance to excel on subsequent exams without being penalized due to test length. To repeat, raw exam scores are converted to letter grades, and letter grades are converted to quality points, based on the following scale: A+ = 15, A = 14, A− = 13, B+ = 12, B = 11, B− = 10, C+ = 9, C = 8, C− = 7, D+ = 6, D = 5, D− = 4, F+ = 3, F = 2, and F− = 1.

Grading Policy

Now for the Good News. I have developed a fairly generous weighting factor for the three exams. The weighting factor is designed to reward students for performing well on your “best” exam and to reduce the impact of the poorer performance on your “worst” exam. To accomplish this, I weight your best test score by a
factor of 1.2 and your two other scores by a factor of 1.0 each. For example, suppose you earned a D on the first exam (5 quality points), an A on the second exam (14 quality points), and a C (8 quality points) on the third exam. The second exam would be multiplied by 1.2, with the first and the third exams would be multiplied by 1.0. The quality points would then be summed, and the sum will be divided by 3 to determine your final course grade. In the above scenario, you would have the following quality points: (5 x 1.0) + (14 x 1.2) + (8 x 1.0) = 29.8, which would be divided by 9.9333, yielding 9.9333 quality points, which would be rounded to 10 quality points, which would be a “B-” for the course. Without the weighting factor, your final course grade would have been 5 + 14 + 8 = 27. That amount would then be divided by 3, giving you 9.0 quality points, which would be equal to a “C+.” Thus, the weighting factor resulted in the difference between a C+ and a B-. In almost every scenario, this approach will result in at least one-half letter grade higher than without using the weighting system. However, to receive this generous weighting factor, students must conform to the “conditions for receiving the weighting factor” discussed in the next paragraph.

**Conditions for Receiving the Weighting Factor.** This weighting system only applies if the student has attended class on a regular basis throughout the semester and if student’s grade on the final examination **has not dropped by more than six unweighted quality points** below the average of his or her first two exams. If his or her attendance has been poor or if his or her final exam grade does drop by more than six quality points below the previous average, then each exam will be equally weighted instead. This approach is deemed necessary in part to prevent students from “blowing off” the final examination, feeling they have scored adequately on the first examination and can afford to slack off on the final exam. I must be able to certify that students performed at a passing level for the course, which requires the completion of all tests and other assignments. In almost every scenario, this weighting factor system will result in at least one-half letter grade higher than without using the weighting system. However, to receive this generous weighting factor, students must conform to the “conditions for receiving the weighting factor.”

**Final Exam Requirements.** Please note that if a student does not take the final exam, that student will automatically receive an F for the course. All students must both exams in order to pass the course.

**Attendance.** Students are expected to attend classes on a regular basis for the full length of the class periods. For each absence or partial absence, one quality point will deducted from the corresponding exam. For example, if a student has 12 quality points for the first exam but has missed two classes prior to the first exam, the student’s quality points score would become 10 instead of 12. That is, it would drop down from a B+ to a B-
on that exam.

**Test-Taking Rules and Guidelines**

**Scantron/ParScore Student Enrollment Sheets.** You will need to buy **Student Enrollment Sheets** for the examinations. The form we will use for this class is the **SCANTRON ParScore Student Enrollment/Answer Sheets**, which will also be described in class. Be sure to bring one of these forms, along with soft lead, #2 pencils, to each examination. The current identification code for this particular answer sheet is Form No. F-288-ERI-L; however, the code number for these Scantron sheets may have changed, as ParScore and Scantron have a penchant for changing these codes. The appropriate form is a 6” x 11” red and white form, with coding on the front and back sides. Before arriving on test days, be certain to fill in your **name** and **Red ID number on both the front and back sides** of the form. Print your name and Red ID number in the appropriate boxes; then fill in the corresponding answer bubbles. You will be allowed to mark on the test, but you will only be given credit for the answers you give on the **answer sheet**. There will be no exceptions to this rule, so be certain that you have correctly recorded your answers in the appropriate locations on the answer sheet. Here is a tip to save you time during examinations: Fill in the answers on the Scantron sheet as you go; do not wait until the end to fill in all the answers.

**Reviewing the Test Before Beginning.** Upon receiving the test, carefully read the cover page and follow any stated instructions. Do not begin the test until directed to do so. When told to do so, make sure there are no pages missing on the exam and no items missing either. It is your responsibility to verify there are no missing
pages or items on your examination booklet before you begin working on the test. After verifying the test is complete and after receiving instructions to do so, you should begin to answer questions.

The Best Strategy for Taking the Tests. Start with those problems which you can answer quickly and accurately, thus building confidence. Skip those questions that you may not understand at first glance. Later, as time permits, return to any problems that appear to be more difficult or more time-consuming. Remember that each item is worth one and only one point. Do not spend an excessive amount of time on one question at the expense of not having time to answer other questions which may have been considerably easier. Of course, you should not leave ANY questions blank—you will not get credit for any unanswered questions. You will also not get credit for any questions you marked correctly on the test booklet but did not mark correctly on the answer sheet.

Stop When Time is Called. When the time limit for the completion of the test has expired, you are expected to immediately quit marking your answer sheet. You are required to turn in the test, your answer sheet, and any allowed “cheat sheets.” Failure to do so will result in an F, so be certain that the instructor, GA, test proctor, or monitor receives all three sets of materials.

Equipment, Materials, and Time During Exams. Employers do not hire you and then expect you to perform job tasks without the aid of job-related resources. Therefore, it is appropriate for you to use your calculators during examinations. Further, you will be allowed to have a limited number ofnotes for the exams. In fact, you must have at least two and can have up to three $8\frac{1}{2}$” x 11” sheets of notes. It is up to you whether you have two or three sheets of notes, which are commonly referred to as your “cheat sheets” for the exams. You may use both sides of all such sheets for your notes. Your notes must come from class materials or from notes you have taken in class. Keep in mind that everyone must turn in all your cheat sheets (no matter how many you have) when you turn in your tests and answer sheets. If you want a copy of your cheat sheets, make that copy in advance of the examination, as they will not be returned. Although the examinations are closed book format, you will need to bring your book with you to have access to Appendix C and Appendix F. You cannot borrow or share books with anyone else during the examinations. You also cannot make copies of any of the pages found in Appendix C, because that material is copyrighted. I cannot allow you to violate those copyright laws, and McGraw-Hill strictly enforces them. Thus, please do not ask if you can make copies of those tables in lieu of having the books, and do not ask me if you can bring copies of tables from other books, as you will not be allowed to do so. One other point—employers do not give you an unlimited amount of time to solve problems. At work, you must learn to work quickly and efficiently, using your resources wisely within your time limitations. The same is true in this course; you must work quickly and efficiently during exams, using your available time and resources wisely. Otherwise, you may feel pressured for time during the evaluation process. However, you will not be given additional time beyond the announced time parameters for each exam.

Details about Cheating and Ethical Practices

Cheating

Hopefully, the topic of cheating will never arise in this course. However, instructors are expected to inform class participants of San Diego State University's rules and guidelines regarding cheating, as well as the rules and guidelines of the individual instructor regarding this topic. My policy on cheating and plagiarism is consistent with the policies of San Diego State University, as described in the next several paragraphs. Before taking each examination in this course, you must sign a form that states that you have read and agreed to abide by San Diego State University's stated policy and guidelines regarding ethical practices during examinations, including cheating and plagiarism. Although there will be various forms used on each examination, with the items, stems, and locations of items randomized on each form, there may still be temptations to beat the system. University Senate's Policy File should serve as the primary source for rules and regulations regarding cheating and/or plagiarism. Please do not take a chance of putting your grade in jeopardy or putting yourself in such an embarrassing and painful situation. During exams, please do not look around, glance at anyone else's examination materials, or behave in any manner that might cause even the slightest appearance of giving or gaining information from another person. Such behavior often leads to suspicion and
concern. The penalty for any form of cheating in my course usually results in an $F$ in the course and possible probation, suspension, or expulsion from San Diego State University.

**Details about Incompletes**

The grade of *Incomplete* will not be granted except in accordance with University policy. You should become familiar with University policy regarding such matters. Generally speaking, an Incomplete is only justified when a small "portion of required course work has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified reasons, and that there is still a possibility of earning credit." Fully justified reasons refer to compelling events beyond the student's control (significant documented illness, death in the family, accidents, etc.). A small portion of required course work implies just that—only a very small part of the course has not yet been completed, and this small part is specifically related to the underlying conditions for the absence. Unless one of these conditions prevails, please do not request consideration for an Incomplete. Also note that before an Incomplete will be granted, a contract must be signed by both the instructor and the student, specifically stating the compelling circumstances for granting the Incomplete, the necessary work to be completed for removal of the Incomplete, and the date by which the work is to be completed. Documents justifying the granting of an Incomplete are to be attached to the contract. The University Senate Policy allows one calendar year to remove an Incomplete.

**Details about the Calculator and the Equations You Will Need to Enter into Your Calculator**

**Calculator Setup for the SOLVE menu.** Please have the equations entered into the SOLVE menu of your calculators prior to the class session for which they will be needed. This will allow you to be able to test and verify these equations for accuracy before moving on. You will find these equations discussed and listed in Appendix H on Blackboard. After the class meeting in which the calculator is first introduced, you will want to enter a number of equations. You should enter them into your calculator as soon as possible, especially the first ones, because you will need most of them soon and all of them shortly thereafter. Many individuals find it convenient to just enter all the equations for the course into the calculator at one time and be done with this laborious task once and for all. Others will prefer entering them in two settings, since there will be two tests. I am listing here the equations I know will be essential for this the course. You can also refer to the Excel workbook entitled "Testing All Calculator Equations" to make sure your equations are entered correctly and will give you the correct answers. That workbook can be found in the Calculator Assistance folder of Blackboard. Here are the **titles** of the equations that will be emphasized. Keep in mind that these are just the brief equation titles. You will need to go to the Appendix H version posted on Blackboard to get the actual equations. That version may be considerably different and updated from the version found in Appendix H of your book.

**"Titles" for the Key Equations for Test 1 (See Appendix H for the Actual Equations)**

**MISCELLANEOUS**

1. NAME  
2. STATISTIC/GENERAL  
3. SS/SAMPLE  
4. COMBINATIONS/NCR  
5. PERMUTATIONS/NPR

**CENTRAL TENDENCY**

6. PERC/DISCRETE/RANK  
7. PERC/DISCRETE/OUTDATED/EXCEL/RANK  
8. PERC/DISCRETE/VALUE  
9. PERC/CONTINUOUS  
10. TRIM/MIN/MAX/RANGE

**VARIABILITY**

16. VARIATION/RATIO
23. POP/SD  
24. SD/SHEPPARD  
25. SS/SAMPLE (Yes, it should be entered into the calculator twice—see above under miscellaneous)  
26. SS/POPULATION  
27. TCHEBYCHEFF/PERCENT  
28. LOWER/BOUNDARY/TCHEBYCHEFF  
29. UPPER/BOUNDARY/TCHEBYCHEFF  
30. Z/SCORE

MEASURES OF SKEWNESS AND KURTOSIS  
34. MOMENT/ANYPOWER/RAW  
35. MOMENT/ANYPOWER/GROUPED  
36. G1/SKEWNESS  
37. Z/SKEWNESS  
38. G2/KURTOSIS  
39. Z/KURTOSIS

PROBABILITY AND PROBABILITY DISTRIBUTIONS  
40. Z/NORMAL/DISTRIBUTION  
41. Z/SCORE (Yes, it should be entered into the calculator twice—see above)  
42. BINOMIAL/MEAN  
43. BINOMIAL/SD  
44. BINOMIAL/COEFFICIENT  
45. BINOMIAL/PROB  
48. HYPER/CUMULATIVE  
49. HYPER/EXACT

“Titles” for the Key Equations for Test 2 (See Appendix H for the Actual Equations)  

CHI-SQUARE TESTS FOR GOODNESS OF FIT OR INDEPENDENCE  
67. CHI/SQUARE/YATES

ONE SAMPLE TESTS FOR MEANS  
50. SE/MEAN/WITH/FCF  
51. SE/MEAN/WITHOUT/FCF  
52. 1SAMPLE/TEST/MEAN/FCF  
53. 1SAMPLE/TEST/MEAN/NO/FCF

CONFIDENCE INTERVALS FOR MEANS  
54. LOWER/BOUNDARY  
55. UPPER/BOUNDARY

TWO SAMPLE TESTS FOR MEANS  
56. SE/DIFF/POOLED  
57. SE/DIFF/UNPOOLED  
58. DF/T/ADJUSTED  
59. SE/DIFF/DEPENDENT/T  
60. Z/SAMPLE/TEST/MEANS

ANOVA TESTS  
61. ONE/WAY/ANOVA/F/TEST  
62. BARTLETT/CHI  
63. SCHEFFE/F
“Titles” for the Key Equations for Test 3 (See Appendix H for the Actual Equations)

**CORRELATION AND REGRESSION**
- 68. SE/CORRELATION
- 69. R/T/CONVERTER
- 75. SLOPE/RISE/RUN
- 76. BIVARIATE/REGRESSION
- 77. ESS/FM
- 78. SE/ESTIMATE/ESSFM
- 79. SE/ESTIMATE/BASIC
- 84. SE/PREDICTED/Y
- 85. Y/CONFIDENCE/LOWER
- 86. Y/CONFIDENCE/UPPER

**MULTIPLE REGRESSION**
- 87. RSQ/FM
- 88. RSQ/ADJ
- 90. F/TEST/RSQ
- 92. RAW/WEIGHT/Z/WEIGHT/CONVERTER
- 93. INTERCEPT/MR
- 94. PREDICTED/Y/MR

“Titles” for Equations Not Necessary for the Course or Exams but May Be Useful Elsewhere

Here are some additional equations that are not at all essential for the course. Some of you may work in an international environment and travel to various parts of the world. If so, you may find these conversion equations useful. You can always add other such equations as appropriate for you. Here are the conversion equations that are currently included in Appendix H.

**CONVERSION EQUATIONS**
- 96. TEMPERATURE/CONVERTER
- 97. WEIGHTS/OUNCES/GRAMS
- 98. WEIGHTS/POUNDS/KILOGRAMS
- 99. DISTANCES/INCHES/CENTIMETERS
- 100. DISTANCES/MILES/KILOMETERS

Playing “What-If” Scenarios Regarding the Determination of Final Course Grades

PLAYING “WHAT-IF” SCENARIOS REGARDING GRADES

Here is an equation you can use to understand and determine how your final course grade will be determined. Let BEST equal the quality points you earn on your best performance. Let NEXT equal the quality points you earn on your next best performance. Let WORST equal the quality points you earn on your worst exam. Then calculate your course GRADE.

MIS/301/FALL/2013: GRADE=((BEST x 1.2) + (NEXT x 1.0) + (WORST x 1.0)) / 3.0
Here is an illustration of the use of this equation. Suppose someone received a C on the first exam, which is worth 8 quality points. Suppose that person then received a D on the second exam, which is worth 5 points. The person is now wondering what grade is needed on the final exam to earn to get a B- for the course. To merit earning that desired final course grade, the person would have to get 9.5 or more quality points (which is halfway between a C+ and a B-). To use the equation, follow these steps:

Input 9.5 for Grade (the grade the person hopes to receive for the course).
Input 8 for NEXT (the best of the person’s first two grades, which may be the same as the worst grade).
Input 5 for WORST (the WORST of the person’s first two grades, which may be the same as the NEXT grade).
Press BEST to determine what grade is needed on the final exam to achieve the desired final course grade.

You should find 12.9167 as the answer needed for the BEST grade. Since grades are based on discrete values, the person would have to obtain an A- (13 quality points) on the final exam to receive a B- for the course. That is not bad, considering the fact that the person had a C and a D on the first two exams. The weighting factor was very helpful for this individual.
The following is a **tentative** schedule for the tests to be given in class. The content may change, as determined throughout the course:

<table>
<thead>
<tr>
<th>Week</th>
<th>Month</th>
<th>Dates</th>
<th>Activities and Important Dates</th>
<th>Reading Assignments Prior to Coming to Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>August</td>
<td>26</td>
<td>First day of classes. Crashing. Calculator setup.</td>
<td>Enter equations into calculator.</td>
</tr>
<tr>
<td>2</td>
<td>September</td>
<td>2</td>
<td>Labor Day. No classes.</td>
<td>Read Chapters 1 and 2. Enter the remaining equations.</td>
</tr>
<tr>
<td>3</td>
<td>September</td>
<td>9</td>
<td>Chapters 1 and 2. Last day to drop classes.</td>
<td>Discuss Chapters 1 and 2.</td>
</tr>
<tr>
<td>4</td>
<td>September</td>
<td>16</td>
<td>Chapters 3 and 4.</td>
<td>Review Chapter 3 and read Chapter 4.</td>
</tr>
<tr>
<td>5</td>
<td>September</td>
<td>23</td>
<td>Chapters 4, 5, and 6. Chapter 5 will only be briefly discussed.</td>
<td>Read Chapters 5 and 6.</td>
</tr>
<tr>
<td>6</td>
<td>September</td>
<td>30</td>
<td>Chapters 6 and 7; review for the first exam.</td>
<td>Prepare for the first exam.</td>
</tr>
<tr>
<td>7</td>
<td>October</td>
<td>7</td>
<td>Test 1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>October</td>
<td>14</td>
<td>Test results returned; Chapters 8 and 14.</td>
<td>Read Chapters 8 and 14.</td>
</tr>
<tr>
<td>9</td>
<td>October</td>
<td>21</td>
<td>Chapters 14 and 9.</td>
<td>Read Chapters 9 and 10.</td>
</tr>
<tr>
<td>10</td>
<td>October</td>
<td>28</td>
<td>Chapters 9 and 10.</td>
<td>Read Chapter 12.</td>
</tr>
<tr>
<td>11</td>
<td>November</td>
<td>4</td>
<td>Chapters 10 and 12.</td>
<td>Prepare for the second exam.</td>
</tr>
<tr>
<td>12</td>
<td>November</td>
<td>11</td>
<td>Veteran's Day. No classes.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>November</td>
<td>18</td>
<td>Test 2</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>November</td>
<td>25</td>
<td>Test results returned; Chapters 15 and 16.</td>
<td>Read Chapters 15 and 16.</td>
</tr>
<tr>
<td>15</td>
<td>December</td>
<td>2</td>
<td>Chapters 15 and 16.</td>
<td>Read Chapter 16.</td>
</tr>
<tr>
<td>16</td>
<td>December</td>
<td>9</td>
<td>Chapter 17.</td>
<td>Read Chapter 17.</td>
</tr>
<tr>
<td>17</td>
<td>December</td>
<td>16</td>
<td>Final exam: 4:00-6:00pm.</td>
<td></td>
</tr>
</tbody>
</table>