COURSE DESCRIPTION: Statistical Methods: Collecting, grouping and presenting data; measures of central tendency and dispersion; probability; testing hypotheses; confidence intervals, and correlation.

PREREQUISITE: MAC 1105 or equivalent with a grade of “C” or better or departmental permission.

CREDIT: 3 semester hours

COURSE OBJECTIVES: This course prepares students for the successful studies of various majors which require STA 2023 (Statistical Methods). Also, see Appendix 1, page 11, for “Course Competencies,” and Appendix 2, page 12, for “Learning Outcomes” of this course.

COURSE COMPETENCIES/LEARNING OUTCOMES (For details, please refer to Appendices 1 & 2, pages 11-13): After completion of this course, the students will achieve course competencies in statistical methods, which will enable them to pursue further studies in their respective majors, requiring STA 2023 (Statistical Methods) (see course objectives above).

GENERAL EDUCATION LEARNING OUTCOMES (For details, please refer to Appendix 3, page 14): As defined by the Miami Dade College, General Education, through the academic disciplines and co-curricular activities, is to provide its students with multiple, varied, and intentional learning experiences to facilitate the acquisition of fundamental knowledge and skills and the development of attitudes that foster effective citizenship and life-long learning. It is hoped that, after successful completion of this course and as graduates of Miami Dade College, students will be able to achieve these general education learning outcomes, particularly, # 1, 2, 3, 4, & 8.


SUPPLEMENTARY MATERIALS - MATHXL FOR HOME WORK: You are strongly advised to use the INTERACTIVE TUTORIAL MATHXL CD-ROM for your home work. This interactive tutorial CD-ROM comes along with your above textbook, and provides algorithmically generated exercises that are correlated at the objective level to the exercises in the textbook. It is highly recommended that you should use it for your home-work. This will increase your speed, accuracy, confidence, and understanding of doing the problems and the directions on the tests. This will also help you in memorizing the formulas and understanding of the concepts, which are very important for the success in any math course.

COVERAGE: Please see the coverage below at the end of this syllabus where a list of sections to be
covered is given. Minor adjustments may be made by the instructor for the completion of the topics. Any uncovered topic before the scheduled date of the test will be covered in the next class after that test. All class/test times/schedules are as per Miami-Dade College Academic Calendar 2008 – 2009, (Spring Term, 2009). Also, minor adjustments may be made at the discretion of the instructor in the test dates, except in the final exam date. The test grades will be available to the students during the class-period in the following class / week after the test is over. It is the responsibility of the students to make an early correction for any conflict of class or test or final exam dates. The instructor will not be responsible for it.

There is no mid-term examination except the Three Tests, and the Final Exam as mentioned below. So, it will be the responsibility of the students to make their own judgment or decision to withdraw from the college or to drop this course, with a “W” or “DR,” after any Test, but on or before Wednesday, March 18, 2009. The instructor will not withdraw the students.

INSTRUCTIONAL METHOD: Lecture / Discussion

SCIENTIFIC CALCULATORS: A non-graphing scientific calculator, along with manual, is required in each lecture. (Some Recommended Scientific Calculators: TI-30XA. Note that Graphing Calculators, such as TI-83, are optional in the class, but are not required). You may also consult your instructor before buying any scientific calculator. It is the responsibility of the students to study the manuals and practice on the calculators. Moreover, you are not allowed to use a cellular phone as a calculator in the class. It is the discretion of the instructor to deduct at least twenty points from the total points at the end of the term for using cellular phone as a calculator in the class. If any student is found using cellular phone as a calculator in the class or during the test or final examination, his / her name will be duly noted by the instructor and reported to the concerned authorities for further action, that is, an “F” in the course, expulsion from the college, etc. In such a case, a student may not be allowed to take a test or final exam or attend the lecture, and may also be asked to leave the class. No written or oral excuses will be accepted in this regard. Please see Items # III and IV of Classroom Policies below for more clarifications.

ACADEMIC SUPPORT CENTER (MATH LAB): The tutorial services of the Academic Support Center (Math Lab), Room 1409, are available to students registered in any math course taught on campus.

LIBRARY: (305) 237 – 8722; ROOM 1116

TESTING: (305) 237 – 8791; ROOM 1224

ADDITIONAL RESOURCES: You may also print out formulas and charts from my Faculty Webpage or your Tiola’s Statistics text book by using the following web-addresses on your personal computers or those in MDC LIBRARY / ASC:

www.aw-bc.com/triola

Note: Some of the documents require Adobe Acrobat Reader version 4.0 or later. You can download the latest version of the Acrobat Reader at Adobe’s website.

A. http://faculty.mdc.edu/mshakil/STATISTICS_%20AN%20INTRODUCTION.pdf
B. http://faculty.mdc.edu/mshakil/Probability_and_Counting_Key_Concepts_and_Formulas.pdf
C. http://faculty.mdc.edu/mshakil/Probability_and_Counting_Flow_Chart.pdf
D. http://faculty.mdc.edu/mshakil/formulas_and_tables_Triola_Statistics.pdf
E. FORMULAS: http://media.pearsoncmg.com/aw/aw_triola_elemstats_10/cw/content/formula.pdf
F. TABLE CARDS:
   http://media.pearsoncmg.com/aw/aw_triola_elemstats_10/cw/content/formula.pdf
   http://media.pearsoncmg.com/aw/aw_triola_elemstats_10/cw/content/supps.html
G. OTHER USEFUL WEBSITES: The following websites may also be useful for online help in your course.
   I. FORMULAS:

III. The following Websites may also be useful for online help in your course:

- Prentice Hall Math Tutor Center: http://www.prenhall.com/tutorcenter/
- Pearson Education InterAct Math: http://www.interactmath.com/
- For Mathematical Formulas and Tables: http://www.sosmath.com/tables/tables.html
- To Print Out A Graph Paper: http://www.mathematicshelpcentral.com/graph_paper/files/Form4C-BW.pdf

IV. The following references may also be useful in your course:


STUDENT RESOURCES: You are also strongly encouraged to visit the following webpage created by the Department of Mathematics of MDC Inter-American Campus, where you can find a number of useful and helpful resources in mathematics to supplement your studies.

http://www.mdc.edu/iac/AcademicPrograms/mathematics/default.asp

MYMDC ACCOUNT: A student login (MyMDC) account is required for ALL online activities as well as to use college computers. A student should visit www.mdc.edusis/ to register and obtain login account.

ACCESS SERVICES: The students, with any form of disability, should contact “Access Services” of the college as soon as the classes start. In case any accommodation or special assistance is required in the class or examination, they should obtain the relevant documents from the Access Services and provide the instructor with these. For further information, contact (305) 237 - 1272 (Hialeah/North Campus).

SERVICE LEARNING: The office of Service Learning is located at the Hialeah Campus of Miami-Dade College. For further information, contact the MDC (Hialeah Campus) Center for Community Involvement (CCI)/Service Learning Coordinator, Ms Corrinne Lockamy, E-mail: corrinne.lockamy@mdc.edu, Office Phone: (305) 237 – 8858.

FACTS: You may visit the State of Florida’s new FACTS (Florida Academic Counseling and Tracking for Students) Web site at www.facts.org to view/print a transcript from a Florida college you are attending or did attend, to access the catalogs of the colleges and universities in Florida, to link to all the Florida public college and university home pages, and other useful information.

GRADING POLICY:

(I) GRADING CRITERIA: Your final grade will be based on Three Multiple-Choice Non-cumulative Tests (including some non-multiple choice questions, if deemed necessary), and a Multiple-Choice Non-cumulative Final Examination. The number of questions in each of the tests and final examination will be 15 to 25. Each of the tests and final exam will be worth 100 score points. In order to facilitate the students
to improve their grades, some extra credit points questions, worth 5 points at most, will be added to each
test, but not to the final exam, before administering the tests, if deemed necessary. **In lieu of adding**
extra credit points questions to the test, these extra credit points may also be used for some
STATDISK / EXCEL Computer Projects, using your own PC or PC’s in ASC Rm. # 1409, which will
help the students to achieve these general education learning outcomes, particularly, # 1, 2, 3, 4,
& 8. Please note that this requirement is fully at the discretion of the instructor. Further note that neither
the lowest test score nor the final examination score will be dropped before averaging for the final grades;
(However, please see NOTES 1-7 below also). There will be “NO CURVE” on grades. Also, note the
following points about the grading policy.

- **NOTE 1:** **All tests and final exam are mandatory.** Anyone who misses any test/exam or Quiz will
  receive an F (0%) for that test/exam or Quiz. Anyone who misses the final exam will receive an F for
  that course. **There will be no make-up for any missed tests, or the final exam, or missed
  quizzes / projects (if any). These must be taken on due dates.** In case a student misses a test
due to accident, traffic ticket, hospitalization, arrest, court date, jury duty, religious observance, etc,
and if a reasonable and authentic document is provided for these and, if in the opinion of the
instructor, the absence is excusable, there will be no makeup test but your final exam score will be
counted twice as to replace the missed test. Please note that the replacement of a missed test by the
final exam score on the above ground will be allowed only once during the entire semester. In such
cases, the final grade will be calculated, out of a total of 400 points, by taking the AVERAGE of the
final examination score and three test scores. If no reasonable and authentic document is provided
for a missed test, then a zero will be awarded for such a test, and the student will be responsible to
earn a lower grade (including an “F”), if the final grades are calculated, out of a total of 400 points, by
taking the AVERAGE of the final examination score and three test scores. **No written or oral
excuses will be accepted for this.**

- **NOTE 2:** If the final examination score is 90 % or above, the lowest test score may be replaced
  by the final examination score before averaging for the final grade provided a student has not
  missed any tests, and if doing so is in favor of the student. Note that none of the missed test
  scores will be replaced by the final examination score.

- **NOTE 3:** **All tests and final exam are mandatory.** However, if a student has taken all the three
tests, and his / her score is 90 % to 100 % (that is, “A” Grade in each of these tests, but not the
average of these), the final grade earned by such a student will be “A” by dropping the final
examination score, provided the student has taken the final exam, and the score in it is above 65 %
but below 90 %. (Note that the final exam is mandatory. If any student misses the final examination,
a zero will be awarded for the missed final examination and the grade earned by the student will be
an “F”).

- **NOTE 4:** All the students are advised to do their home-work as provided in the syllabus, and, if
  possible, also practice relevant problems through MathXL/MyMathLab as per instruction given in
  your text book. If there is any technical difficulty in using MathXL/MyMathLab, it should be
  immediately reported to the instructor. In either case, all the students will be required to do their
  home-work as already assigned by the instructor in the syllabus as well as some supplementary
  H/W assignments assigned in the class. Please note that the homework (including those using
  MathXL/MyMathLab) will not be graded.

- **NOTE 5:** **Instructor’s Discretion:** It is the discretion of the instructor to drop one of the lowest
test scores (but not the final exam score), before averaging for the final course grade, provided a
student has not missed any test and the final examination, and if doing so is in favor of the
student. In such a case, the final course grades will be calculated out of a total of 300 points, by
taking the total of the final examination score and the two best test scores, and dividing the total
by 3 before averaging for the final course grade. Please note that this requirement is fully at the
discretion of the instructor which will be only decided by the instructor after Test 3. Further, if you
miss any test due to accident, traffic ticket, hospitalization, arrest, court date, jury duty, religious,
observance, etc, there will be no make-up for the missed test. However, in such a case, a missed test may be considered as the lowest test score and apply the above-said rule, which is the discretion of the instructor. Please note that the replacement of a missed test by the final exam score or dropping of one of the lowest test scores on the above ground will be allowed only once during the entire semester.

Important Note (Re: Home-Work): In order to facilitate the students to improve their grades, a maximum of two (2) extra points for regularly presenting home-work to the instructor on each test day (but not on the final exam day) based on the home-work from each chapter for the said test as listed in the syllabus (that is, a minimum 5-10 problems from each exercise for the said test as listed in the syllabus) will be added to the total of the test and final exam scores before averaging for the final grading, if deemed necessary. In order to earn extra credit points for these home works, you must include these in your portfolio and submit along with it on the day of the test. The details of portfolio are described below. Late submission of the home work after the test is already given or home work for any missed test will not be accepted or graded and a zero point will be awarded for it. Please note that this requirement is fully at the discretion of the instructor.

Important Note (Re: Attendance): In order to facilitate the students to improve their grades, a maximum of five (5) extra points for 100 % attendance (without any absences) will be added to the total of the test, quiz and final exam scores before averaging for the final grading, if deemed necessary. Please note that this requirement is fully at the discretion of the instructor.

NOTE 6: Please see the Item # III (Evaluation and Grading Scale) below also.

STUDENT PORTFOLIO (REQUIRED TO EARN ANY EXTRA CREDIT POINTS): In order to facilitate the students to improve their grades, every enrolled student is required to prepare and complete a portfolio to earn any extra credit points for their home work, projects, quizzes, attendance, etc., as listed in the syllabus and discussed in the class. Your portfolio will consist of the following materials and must be organized nicely and systematically in a 2 inches Binder with Index Reference Dividers: (i) Cover Page (Name, Student ID, Course, Reference No., Semester, etc.); (ii) Your Syllabus; (iii) All Test Scantrons; (iv) Notes from Textbook; (iv) Formula-Sheet; (v) Notes from Class; (vi) Homework Problems from Textbook/MathXL/MyMathLab (including your Extra Credit Homework Problems as mentioned above); and (vii) Records of Your Regular Attendance. You must stay current with your portfolio and submit it on each test day at the beginning of class (but not on the final exam day), which will be returned to you before you leave after the test duly signed by your instructor. Details on acceptable portfolios will be provided in class. The portfolio will count towards your extra credit points earned during the entire semester, but not exceeding 20 - 25 points, and will be added to the total of the test and final exam scores before averaging for the final grading. Please note that this requirement is fully at the discretion of the instructor. Failure to prepare and submit the portfolio as mentioned above will deny you earning any extra credit points, and a zero will be awarded for it. Late submission of the portfolio after the test is already given or portfolio for any missed test will not be accepted or graded and a zero point will be awarded for it. No written or oral excuses will be accepted for this. The following scale will be used for grading the portfolio: (I) Unsatisfactory: 0 point; (II) Poor: 1 point; (III) Satisfactory: 2 points; and (IV) Excellent: 3 points.

(II) HOMEWORK:

(a) Usually the odd-numbered problems at the end of each section and all of the chapter reviews are suggested for the homework problems and assignments. This will increase your speed, accuracy, confidence, and understanding of doing the problems and the directions on the tests. It is strongly suggested that you should do all the homework assigned. This will also help you in memorizing the formulas and understanding of the concepts, which are very important for any math course. The homework will not be graded. Some Supplementary H/W may also be assigned in the class. The students
are strongly advised and highly recommended to see their course instructor during office-hours for any help and advisement in their home-work and course materials.

(b) You may also visit the Academic Support Center (Room 1409) / Math Study Room at Hialeah Campus or MDC Math Lab (North Campus) for additional help. The Math Lab at MDC (Hialeah Campus / North Campus) is an open lab for currently enrolled mathematics students. There are tutors, videotapes, and software available to assist students.

(III) EVALUATION AND GRADING SCALE: Your final grades will be calculated out of a total of 400 points, by taking the AVERAGE of the final examination score and the three test scores. (However, minor adjustments may be made in your final grades calculation at the discretion of the instructor; please see the Item # I, NOTES 1 - 6 of Grading Criteria above for details). “Each of the tests and the final exam will have equal weight.” If any student misses the final examination, a zero will be awarded for the missed final examination and the grade earned by the student will be an “F.” The following scale will be used for the calculation of final grade. “Minor adjustments may be made by the instructor.” Please see the Item # I (Grading Criteria) above also.

<table>
<thead>
<tr>
<th>GRADE</th>
<th>GRADING SCALE (Note: Here x represents the average of the final examination score and the test scores, including any extra credit points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 % ≤ x ≤ 100 %</td>
</tr>
<tr>
<td>B</td>
<td>80 % ≤ x &lt; 90 %</td>
</tr>
<tr>
<td>C</td>
<td>70 % ≤ x &lt; 80 %</td>
</tr>
<tr>
<td>D</td>
<td>60 % ≤ x &lt; 70 %</td>
</tr>
<tr>
<td>F</td>
<td>Below 60 %</td>
</tr>
</tbody>
</table>

(IV) MANDATORY TESTS AND FINAL EXAM: All tests and final exam are mandatory. There will be no make-up for any missed tests, or the final exam, or missed quizzes / projects (if any). However, if you miss any test due to accident, traffic ticket, hospitalization, arrest, court date, jury duty, religious observance, etc, you must produce an authentic document to prove your absence so that your final exam score will be counted twice as to replace the missed test. A doctor’s note is not acceptable unless it says “(student's name) was unable to attend school on (date of test).” Please note that the replacement of a missed test by the final exam score on the above ground will be allowed only once during the entire semester. (However, the said provision for the missed test will not be applied to the missed quizzes or projects (if any given in the class). If any student misses a quiz or a project, a zero will be awarded for the missed quiz or project). Further, as it is the discretion of the instructor to apply the provision of Item # I, NOTE 3 (Grading Criteria) above for the whole class if it is in favor of the students, then in such a case a missed test may be considered as the lowest test score and the rule of Item # I, NOTE 5 (Instructor’s Discretion of Grading Criteria) above may be applied. Tardiness is permitted on test days without penalty although you will have less time on the test than everyone else. On test days, if you are so late that someone has already turned in their test before you arrive, you will not be allowed to take the test and a zero will be given for the respective test. No written or oral excuses will be accepted for this.

(V) NOTICE ABOUT TEST DATES: Please see the Lecture-Schedule below. It is the responsibility of the students to note down the test and final exam dates. However, you will have at least one class notice of an upcoming test. All tests and final exam are mandatory. There will be no makeup test in any circumstances (see Item VI below also). A zero will be awarded for any missed test. No written or oral excuses will be accepted for this.

(VI) NO MAKE UP OF TESTS / FINAL EXAM / QUIZZES / HW / PROJECTS: There will be no make-up for any missed tests, or the final exam, or missed quizzes / projects (if any). These must be taken on due dates. In case a student misses a test due to accident, traffic ticket, hospitalization, arrest, court date, jury duty, religious observance, etc, and if a reasonable and authentic document is provided for these and, if in the opinion of the instructor, the absence is excusable, there will be no makeup test but your final exam score
will be counted twice as to replace the missed test. Please note that the replacement of a missed test by the final examination score and three test scores. If no reasonable and authentic document is provided for a missed test, then a zero will be awarded for such a test, and the student will be responsible to earn a lower grade (including an “F”), if the final grades are calculated, out of a total of 400 points, by taking the AVERAGE of the final examination score and three test scores. No written or oral excuses will be accepted for this. However, it is the discretion of the instructor to apply the provision of Item # I, NOTE 5 (Instructor’s Discretion of Grading Criteria) above for the whole class if it is in favor of the students. In such a case, a missed test may be considered as the lowest test score and the rule of Item # I, NOTE 5 (Instructor’s Discretion of Grading Criteria) as given above may be applied.

(VII) CHEATING ETC. IN THE EXAMINATION: A “Zero, or award of an “F” in the course, or “expulsion from the college,” etc. will be given in the test for cheating in any form, including plagiarism, taking help or copying from other students, or giving help to the other students during the tests / final exam / quizzes. If any student is caught cheating during the examination, his / her name will be duly noted by the instructor and reported to the concerned authorities for further action (namely, award of an “F” in the course, expulsion from the college, etc.). For details please see the Students’ Hand-Book. No written or oral excuses will be accepted for this.

CLASSROOM POLICIES:

(I) ATTENDANCE: Attendance is required for every class and students are responsible for all course work, whether present or not. More than Three Unexcused Absences during the entire semester is considered excessive and will result in a failing grade or the name of the student will be purged from the class roster. In addition, please note the following requirements.

(a) NOTE: Tardiness is not acceptable. “It is the discretion of the instructor to deduct at least ten points from the total points at the end of the term for each tardiness (even one second late constitutes a tardiness).” No written or oral excuses will be accepted.

(b) NOTE: Except in the case of an emergency, no students will be allowed to leave the class-room once the class has begun. During an emergency, the instructor’s permission must be sought before leaving the class-room. “It is the discretion of the instructor to deduct at least ten points from the total points at the end of the term for each such violation.” No written or oral excuses will be accepted.

(c) NOTE: “It is the discretion of the instructor to deduct at least ten points from the total points at the end of the term for each absence after the third absence during the semester. More than two absences will also result in a failing grade or the name of the student will be purged from the class roster.” No written or oral excuses will be accepted.

(II) DROPS OR WITHDRAWALS: These are not initiated by the instructor. If you stop attending, you must drop the class yourself to avoid a grade of “F”.

a) The last day to withdraw from classes with “100% refund” or to change courses “without penalty” or to register, add, drop, or change sections of credit courses without signature of instructor is Monday, January 12, 2009.

b) The deadline for dropping classes with a grade of “DR” or the last day to withdraw from the college with a grade of “W” is on or before Wednesday, March 18, 2009, which is the responsibility of the students. The instructor will not withdraw or award a grade of “W” or “DR”.
(III) PURGE ROLLS: The students are encouraged to attend all the classes regularly, which is important. For any missed class, the students themselves are responsible for any makeup or catch-up of the materials. Unexcused absences for more than three days at any time during the semester are considered excessive. The names of such absentees will be purged from the class roll by the instructor without any notice as per rules and regulations stipulated by the college. Once the name of a student is purged from the class roll by the instructor, it cannot be reinstated in any circumstance. “Moreover, it is the discretion of the instructor to purge a student’s name from the class roll or award an “F” due to excessive absences, unsatisfactory progress, indiscipline, misconduct, or any disruptive behavior in the class.” No written or oral excuses will be accepted for this.

(IV) ACADEMIC MISCONDUCT: The student is responsible for any classroom misbehavior or academic misconduct or indiscretion, which is conducive to the educational process and for achieving standards of performance established by the instructor. A student may be penalized for any misbehavior or misconduct. The academic misconduct includes (but is not limited to) giving or receiving assistance on a test, quiz, or homework assignment for which such assistance is not permitted, falsifying a document to obtain an excuse from a test, and using unauthorized notes on a test or quiz. “The instructor has the final authority in all matters relating to the course content, grading practices, and classroom policies & procedures.” Penalties for Academic Misconduct range from an “F” in the course to “expulsion” from the college. A more complete definition of Academic Misconduct is given in the Student Handbook. In the tests or final exam, no student will be allowed to use the textbook or class-notes or handouts or formula-sheets. The students should review all materials learnt in previous math classes, and memorize all the relevant formulas. It is strongly suggested that you should do all the homework assigned. This will also help you in memorizing the formulas and understanding of the concepts, which are very important for this math course. “However, it is the discretion of the instructor to allow students to use some necessary and difficult formulas in the tests or final exam which should be prepared on Index Cards (not exceeding two) or on a letter-sized paper (not exceeding one, and may be written on both sides), in consultation with your instructor. If allowed by the instructor, these must be shown to the instructor before starting the examination. The students must write their names and student ID’s on these. There should no examples or problems written on the cards or papers, which will be treated as cheat. A “Zero” may be given for this.” The students are also advised to make photocopies of all necessary tables / charts beforehand, if required. You will not be allowed to use textbook for formulas / tables / charts, etc, in the tests or the final exam. No written or oral excuses will be accepted for this.

(V) BEEPERS AND CELLULAR PHONES: Use of cellular phones, beepers, musical instruments, CD players, etc., or keeping these in person are not allowed in the class-room. These should be kept in the bags and must be turned off before the classes start. The vibrate mode is not considered turned off. Bleepers and cellular phones must not be visible to you or instructor. If they are on your belt, they are visible. If they are in your book bag or pocket, they are not. Violations of this policy will result in your having to put the beeper or cell phone in the hallway immediately outside the class. If you are afraid of it being stolen, you may choose to leave the class with it, but you will not be readmitted to the class that day. If this occurs during a test and you choose to leave rather than put the beeper or phone in the hallway, all unanswered test questions will be marked wrong. All students are required to abide by the said policy about cellular phones, beepers, musical instruments, and CD players. “It is the discretion of the instructor to deduct at least ten points from the total points at the end of the term for each such violation.” Further, penalties for violation of this policy may also result in an “F” in the course or “expulsion” from the class or the matter being reported to the concerned authorities in the college, such as the Chair, or Academic Dean, or others. No written or oral excuses will be accepted for this.

(VI) NO FOODS AND DRINKS ALLOWED: It should be noted that no foods (including gums) and drinks (except water) will be allowed in the class room. “It is the discretion of the instructor to deduct at least ten points from the total points at the end of the term for each such violation.” Further, penalties for violation of this policy may also result in an “F” in the course or “expulsion” from the class or the matter being reported to the concerned authorities in the college, such as the Chair, or Academic Dean, or others. No written or oral excuses will be accepted for this.
(VII) NO TALKING ALLOWED: It should be noted that no talking will be allowed in the class room. "It is the discretion of the instructor to deduct at least ten points from the total points at the end of the term for each such violation." Further, penalties for violation of this policy may also result in an "F" in the course or "expulsion" from the class or the matter being reported to the concerned authorities in the college, such as the Chair, or Academic Dean, or others. No written or oral excuses will be accepted for this.

(VIII) NOTE: For further information, please refer to Students' Rights & Responsibilities Handbook of Miami Dade College. The students are expected to adhere strictly by the rules & regulations as stipulated in the handbook. In violation of any rule, disciplinary action may be taken accordingly. No written or oral excuses will be accepted for this.

LECTURE / TEST SCHEDULE AND H/W ASSIGNMENTS (TENTATIVE)
(SOME SUPPLEMENTARY H/W MAY ALSO BE ASSIGNED IN THE CLASS)
(Minor adjustments may be made at the discretion of the instructor)

See below & pages 9 - 10 (continued)

Note the following:

(i) Minor adjustments may be made in the topics / problems at the discretion of the instructor.
(ii) The students are directed to prepare some of the easy topics by themselves if not covered in the class due to the constriction of time. The tests and final exam will cover all the topics scheduled in the syllabus. The students are advised to consult the instructor for any help in this regard during the office hours. No written or oral excuse will be accepted for this.
(iii) SUPPLEMENTARY H/W FROM CHAPTER EXCERCISE / SUMMARY / REVIEW MAY ALSO BE ASSIGNED.
(iv) All tests and final examination will be multiple-choice.
(v) If time permits, during the last 5 to 10 minutes of each lecture (except the test days), the instructor will answer some questions from home work. After home work session, the lecture will be over for the day.

(A) TEST SCHEDULE:

I. Test # 1: M, Feb 02, 2009: During Class-time
II. Test # 2: W, Feb 25, 2009: During Class-time
III. Test # 3: W, Mar 25, 2009: During Class-time
IV. Review For Final Examination: W, Apr 22, 2009: During Class-time
V. Final Examination: W, Apr 29, 2009, 7:30 PM – 9:00 PM (90 Minutes)

(B) LECTURE & EXAM SCHEDULE: Please see below (continued on Pages # 8 - 9).

LECTURE-SCHEDULE AND H/W ASSIGNMENTS (TENTATIVE) (Total: 30 Lectures)
Minor adjustments may be made in the topics / problems at the discretion of the instructor.
NOTE: Any uncovered topic will be covered in the next class.
SUPPLEMENTARY H/W FROM CHAPTER SUMMARY / REVIEW MAY ALSO BE ASSIGNED.
NOTE: All tests and final examination will be multiple-choice, unless notified by the instructor in the class).

<table>
<thead>
<tr>
<th>MTG #</th>
<th>DAY / DATE</th>
<th>CHAPTERS</th>
<th>SECTIONS</th>
<th>EXERCISES / PAGES / PROBLEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W, Jan 07</td>
<td>Introduction to Syllabus; Chapter 1</td>
<td>1.1 (Overview); 1.2 (P. 5 – 6); 1.3 (P. 15); 1.4 (P. 26 – 28)</td>
<td>1.2; P. 10: # 1 – 12 &amp; 21 - 24 (ODDS); 1.3; P. 18: # 1, 3, 5, 11, 15, 19 – 25 (ODDS) (For self-study by students); 1.4; P. 31: # 6 – 8, 13 – 24 (ODDS), 26, 28, 29</td>
</tr>
<tr>
<td>2</td>
<td>M, Jan 12</td>
<td>Chapter 1 (Contd. as above); &amp; Chapter 2</td>
<td>2.1 (Overview); 2.2; 2.3 – 2.4 (Frequency &amp;</td>
<td>2.2; P. 48: # 1 – 19 (ODDS), 21; 2.3; P. 54: # 1 – 13 (ODDS); 2.4; P. 66: # 1, 2, 6, 7, 9, 12, 15</td>
</tr>
<tr>
<td>Date</td>
<td>Notes</td>
<td>Chapters/Sections</td>
<td>Review/Assignment</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>W, Jan 14</td>
<td>Relative Frequency Histograms; Frequency Polygon; Cumulative Frequency Graph; &amp; Stem-plot</td>
<td>3.1 (Overview); 3.2; 3.3</td>
<td>3.2: P. 86: # 1 – 13 (ODDS), 17, 25, 27; 3.3: P. 104: # 1 – 17 (ODDS), 25 – 31 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>M, Jan 19</td>
<td>MLK Jr. Day</td>
<td>HOLIDAY NO CLASSES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W, Jan 21</td>
<td>Relative Frequency Histograms; Frequency Polygon; Cumulative Frequency Graph; &amp; Stem-plot</td>
<td>3.4: 3.5 (Students must read pp. 119 – 125).</td>
<td>3.4: P. 146: # 1 – 3, 5 – 25 (ODDS); 3.5: P. 126: # 1 – 7 (ODDS) (Students must use STATDISK / Excel from the textbook, using their own PC or PC’s in ASC Rm. # 1409, to generate the box plots and interpret the results. Hint: See pp. 119 – 125)</td>
<td></td>
</tr>
<tr>
<td>M, Jan 26</td>
<td>Relative Frequency Histograms; Frequency Polygon; Cumulative Frequency Graph; &amp; Stem-plot</td>
<td>10.2 (P. 517 – 524 Correlation); 10.3 (Regression)</td>
<td>10.2: P. 533: # 5, 7, &amp; 9 (Find r &amp; r²) 10.3: P. 563: # 9, 10, 13 &amp; 15 (Students must use STATDISK / Excel from the textbook, using their own PC or PC’s in ASC Rm. # 1409, for some Correlation &amp; Regression problems, and interpret the results. Hint: See p. 532 &amp; p. 552, respectively)</td>
<td></td>
</tr>
<tr>
<td>W, Jan 28</td>
<td>Chapter 10 (Contd. as above), &amp; Test # 1 Review</td>
<td>Review for Test # 1 Review</td>
<td>Review for Test # 1: Chapters 1, 2, 3 &amp; 10 as above</td>
<td></td>
</tr>
<tr>
<td>M, Feb 02</td>
<td>TEST # 1</td>
<td>TEST # 1 (Chapters 1, 2, 3, &amp; 10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W, Feb 04</td>
<td>Chapter 4</td>
<td>4.1 (Overview); 4.2; 4.3</td>
<td>4.2: P. 146: # 1 – 13 (ODDS); 17 – 25 (ODDS); 4.3: P. 156: # 1 – 13 (ODDS), 21, 22</td>
<td></td>
</tr>
<tr>
<td>M, Feb 09</td>
<td>Chapter 4 (Contd.)</td>
<td>4.4; 4.5</td>
<td>4.4: P. 165: # 1 – 19 (ODDS); 4.5: P. 171: # 1 – 17 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>W, Feb 11</td>
<td>Chapter 4 (Contd.)</td>
<td>4.7</td>
<td>4.7: P. 186: # 1 – 15 (ODDS), 27, 29, 30</td>
<td></td>
</tr>
<tr>
<td>M, Feb 16</td>
<td>Chapter 5</td>
<td>5.1 (Overview); 5.2</td>
<td>5.2: P. 209: # 1 – 19 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>W, Feb 18</td>
<td>Chapter 5 (Contd.)</td>
<td>5.3; 5.4</td>
<td>5.3: P. 220: # 1 – 29 (ODDS); 5.4: 227: 1 – 11 (ODDS), 19</td>
<td></td>
</tr>
<tr>
<td>M, Feb 23</td>
<td>Test # 2 Review</td>
<td>Review for Test # 2 Review</td>
<td>Review for Test # 2: Chapters 4 &amp; 5 as above</td>
<td></td>
</tr>
<tr>
<td>W, Feb 25</td>
<td>TEST # 2</td>
<td>TEST # 2 (Chapters 4 &amp; 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M, Mar 02</td>
<td>Chapter 6</td>
<td>6.1 (Overview); 6.2; 6.3</td>
<td>6.2: P. 257: # 1 – 27 (ODDS), 37, 39; 6.3: P. 266: # 1 – 17 (ODDS), 21, 23</td>
<td></td>
</tr>
<tr>
<td>W, Mar 04</td>
<td>Chapter 6 (Contd.)</td>
<td>6.4; 6.5 (CLT: An Introduction)</td>
<td>6.4: P. 278: # 1 – 7 (ODDS), 11</td>
<td></td>
</tr>
<tr>
<td>M, Mar 09</td>
<td>Chapter 6 (Contd.)</td>
<td>6.5</td>
<td>6.5: P. 287: # 1 – 19 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>W, Mar 11</td>
<td>Chapter 7</td>
<td>7.1 (Overview); 7.2 (pp. 321 – 325) &amp; 7.3 (pp. 338 – 341): Estimating the population mean ( \mu ). Assumptions, Definitions of Point &amp; CI Estimates, &amp; Margin of Error, for estimating the value of a parameter, e.g., population mean ( \mu ), and illustration by some examples from 7.3: P. 345: # 1 – 8 (ODDS)</td>
<td>7.1 (Overview); 7.2 (pp. 321 – 325) &amp; 7.3 (pp. 338 – 341): Estimating the population mean ( \mu ). Assumptions, Definitions of Point &amp; CI Estimates, &amp; Margin of Error, for estimating the value of a parameter, e.g., population mean ( \mu ), and illustration by some examples from 7.3: P. 345: # 1 – 8 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>M, Mar 16</td>
<td>Chapter 7 (Contd.)</td>
<td>7.3 (Contd.)</td>
<td>7.3: P. 346: # 9 – 35 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>W, Mar 18</td>
<td>Chapter 7 (Contd.)</td>
<td>7.4</td>
<td>7.4: P. 359: # 1 – 25 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>M, Mar 23</td>
<td>Test # 3 Review</td>
<td>Review for Test # 3 Review</td>
<td>Review for Test # 3: Chapters 6 &amp; 7 as above</td>
<td></td>
</tr>
<tr>
<td>W, Mar 25</td>
<td>Test # 3</td>
<td>TEST # 3 (Chapters 6 &amp; 7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M, Mar 30</td>
<td>Chapter 8</td>
<td>8.1 (Overview); 8.2</td>
<td>8.2: P. 403: 1 – 39 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>W, Apr 01</td>
<td>Chapter 8 (Contd.)</td>
<td>8.2 (Contd.) &amp; 8.4 (Traditional Method):</td>
<td>8.2 (Contd.): P. 403: 1 – 39 (ODDS); 8.4: P. 422: 1 – 9 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Notes</td>
<td>Sections</td>
<td>Page(s)</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>26 Apr 06</td>
<td>Chapter 8 (Contd.)</td>
<td>8.4 (Contd.) (P-Value Method: P. 419, &amp; Traditional Method: P. 410)</td>
<td>8.4: P. 422: 9 – 17 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>27 Apr 08</td>
<td>Chapter 8 (Contd.)</td>
<td>8.5 (Traditional Method only: Similar to Example on P. 427 - 428)</td>
<td>8.5: P. 431: 1 – 31 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>29 Apr 15</td>
<td>Chapter 9 (Contd.)</td>
<td>9.3 (Method: Part 1: pp. 469 - 473); 9.4</td>
<td>9.3 (Contd.); P. 478: # 1 – 13 (ODDS); 9.4; P. 489: # 1 – 13 (ODDS)</td>
<td></td>
</tr>
<tr>
<td>30 Apr 20</td>
<td>Chs. 8 &amp; 9 (Contd.)</td>
<td>7.2 &amp; 8.3: Proportion</td>
<td>Re: Proportion–TB Problems from Exercises</td>
<td></td>
</tr>
<tr>
<td>31 Apr 22</td>
<td>Review for Final Exam</td>
<td>Review of Some Problems for Final Exam</td>
<td>Review For Final Exam: Emphasis on Chapters 8 and 9 as discussed above.</td>
<td></td>
</tr>
<tr>
<td>32 Apr 29</td>
<td>FINAL EXAM Time: 7:30 PM – 9:00 PM</td>
<td>FINAL EXAM</td>
<td>FINAL EXAM: Emphasis on Chapters 8 and 9 as discussed above.</td>
<td></td>
</tr>
</tbody>
</table>

**APPENDIX 1**

**COURSE COMPETENCIES**

**STA 2023 – Statistical Methods**

**Competency 1:** The student will be able to analyze data by:

a. Constructing and interpreting frequency tables and graphs such as bar graphs, pie charts and stem-and-leaf plots.
b. Computing and interpreting the measures of centrality: the mean, median, mode and midrange.
c. Computing and interpreting the measures of dispersion: the range, variance and standard deviation.

**Competency 2:** The student will be able to apply the measures of position by:

a. Computing z-scores.
b. Applying the Empirical Rule to the Normal Distribution.
c. Applying the Chebyshev’s Rule to the Non-Normal (or unknown) Distributions.

**Competency 3:** The student will be able to apply the counting principles by:

b. Computing the possible outcomes of compound events.
c. Computing Combinations and Permutations.

**Competency 4:** The student will be able to apply basic probability theory by:

a. Describing a sample space and an event.
b. Calculating probabilities of simple, compound and conditional events.

**Competency 5:** The student will be able to analyze random variables by:

a. Distinguishing between discrete and continuous random variables.
b. Constructing a probability distribution for a discrete random variable and computing its mean and standard deviation.
c. Computing probabilities for random variables having a binomial distribution.
d. Computing probabilities for random variables having a normal distribution.
e. Applying the Central Limit Theorem.
f. Approximating the Binomial Probability using the Normal Distribution.

Competency 6: The student will be able to analyze confidence intervals by:

a. Constructing confidence intervals of a single mean with a known population standard deviation.
b. Constructing confidence intervals of a single mean with an unknown population standard deviation.
c. Constructing confidence intervals of a single proportion.
d. Constructing confidence intervals of the difference between two means.

Competency 7: The student will be able to apply hypothesis test procedures by:

a. Identifying Type I and Type II errors.
b. Identifying and interpreting p-values.
c. Testing a single mean for large or small samples
d. Testing the difference between two means.
e. Testing a single proportion.

Competency 8: The student will be able to analyze bivariate data by:

a. Constructing and interpreting a scatter-plot.
b. Computing and interpreting the linear correlation coefficient.
c. Determining the simple linear regression equation and using it to make predictions.

APPENDIX 2

LEARNING OUTCOMES

STA 2023 – Statistical Methods

ITEM #    TOPICS
1          Construct a frequency distribution, which also shows cumulative and relative frequencies
2          Construct a histogram
3          Construct and interpret stem-and-leaf plots
4          Compute measures of central tendency
5          Compute measures of dispersion
6          Find the percentile of a score or find the score corresponding to a percentile
7          Construct a box-and-whisker diagram
8          Use various counting rules, including the Multiplication Rule, Permutations and Combinations
9          Know the meanings of sample space, outcome, event, classical vs. empirical probability
10         Compute probabilities of simple events, complement probabilities, and odds
11         Apply the addition rules of probability
12         Apply the multiplication rules of probability
13         Compute conditional probabilities
14         Understand the meaning of a probability distribution and be able to construct discrete probability distributions
15         Compute the mean & variance of a probability distribution
16         Find the expected value of a discrete probability distribution
17         Compute probabilities using the binomial probability distribution
18         Apply the empirical rule for normally distributed data
Calculate z-scores and find probabilities for normally distributed data
Compute the mean of the sampling distribution of the means or proportions
Apply the Central Limit Theorem
Apply the normal approximation to the binomial distribution
Construct confidence intervals for proportions
Construct confidence intervals for a mean \( \sigma \) Known or \( \sigma \) Not known
Perform hypothesis tests for proportions
Perform hypothesis tests for means \( \sigma \) Known or \( \sigma \) Not known
Perform hypothesis tests for variances or standard deviations (OPTIONAL)
Compute the p-value associated with a hypothesis test
Understand the relationship between a confidence interval and a two-tail hypothesis test.
Perform hypothesis tests for the difference between two means (independent samples)
Perform hypothesis tests for the difference between two means (small, dependent samples: Matched Pairs.)
Perform hypothesis tests for the difference between two proportions
Construct a scatter-plot for paired data
Compute and understand the meaning of the linear correlation coefficient
Determine the linear regression equation for paired data
Be able to graph a linear regression equation and use it to make predictions

The mission of Miami-Dade College is to provide accessible, affordable, high quality education by keeping the learners’ needs at the center of decision making and working in partnership with its dynamic, multi-cultural community.
General Education Learning Outcomes at MDC

Miami Dade College provides academic experiences and co-curricular activities so that all students can acquire fundamental knowledge, skills and attitudes that foster effective personal and social leadership and life-long learning. These experiences form the basis for achieving the Learning Outcomes, and are encountered by students in the required general education.

**Purpose:** Through the academic disciplines and co-curricular activities, General Education provides multiple, varied, and intentional learning experiences to facilitate the acquisition of fundamental knowledge and skills and the development of attitudes that foster effective citizenship and life-long learning.

As graduates of Miami Dade College, students will be able to:

1. Communicate effectively using listening, speaking, reading, and writing skills.
2. Use quantitative analytical skills to evaluate and process numerical data.
3. Solve problems using critical and creative thinking and scientific reasoning.
4. Formulate strategies to locate, evaluate, and apply information.
5. Demonstrate knowledge of diverse cultures, including global and historical perspectives.
6. Create strategies that can be used to fulfill personal, civic, and social responsibilities.
7. Demonstrate knowledge of ethical thinking and its application to issues in society.
8. Use computer and emerging technologies effectively.
9. Demonstrate an appreciation for aesthetics and creative activities.
10. Describe how natural systems function and recognize the impact of humans on the environment.

The above ten Learning Outcomes are broad and general, rather than specific. Thus, they are encountered throughout the entire range of disciplines. They are also encountered throughout the whole college experience.
### MIAMI-DADE COLLEGE - Academic Year 2008-2009

<table>
<thead>
<tr>
<th>Event</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Registration Begins:</td>
<td>M Oct 06, 2008</td>
</tr>
<tr>
<td>2. Late Registration Begins ($50 fee)</td>
<td>T, Jan 06, 2009</td>
</tr>
<tr>
<td>4. Last Day to Change Courses without Penalty: Withdraw from classes with 100% refund; Register, add, drop, or change sections of credit courses without signature of instructor</td>
<td>M, Jan 12, 2009</td>
</tr>
<tr>
<td>5. CLAST: Deadline to Register Date of Test</td>
<td>F Jan 23, 2009&lt;br&gt;S Feb 21, 2009</td>
</tr>
<tr>
<td>6. Last Day to Withdraw with Grade of W</td>
<td>W, Mar 18, 2009</td>
</tr>
<tr>
<td>7. Last Day of Classes</td>
<td>F Apr 24, 2009</td>
</tr>
<tr>
<td>8. Last Day of Final Exams</td>
<td>F May 01, 2009</td>
</tr>
<tr>
<td>9. Last Day to Apply for Degree &amp; Name Appear in Commencement Program</td>
<td>M Mar 30, 2009</td>
</tr>
<tr>
<td>10. Commencement Ceremony</td>
<td>S May 02, 2009</td>
</tr>
<tr>
<td>R, Mar 5, 2009** (Professional Development Day – No Classes)</td>
<td></td>
</tr>
</tbody>
</table>

---

The mission of Miami-Dade College is to provide accessible, affordable, high quality education by keeping the learners' needs at the center of decision making and working in partnership with its dynamic, multi-cultural community.
I, _____________________________, Student ID # _____________________,
have read and understood the terms and conditions as stipulated in the syllabus for the course STA 2023 (STATISTICAL METHODS), M / W, 7:05 PM - 8:20 PM, Ref # 492208, Sec # 002, Spring Term, 2009 (Tuesday, Jan 06 – Friday, May 01, 2009), by the course instructor, Dr. Mohammad Shakil, and provided to me by him on this first day of the class at Miami-Dade College, Hialeah Campus. By signing the contract, I agree with full responsibility to abide by the terms and conditions as mentioned in the said syllabus till the completion of the term.

________________________________                ________________________
Student’s Signature                                                       Date

The mission of Miami-Dade College is to provide accessible, affordable, high quality education by keeping the learners’ needs at the center of decision making and working in partnership with its dynamic, multi-cultural community.
Student Registration for MyMathLab

Website Description

MyMathLab/CourseCompass is a website you can use to assess your math skills, do homework, take tests, view videos and more! Access to this website is with a MyMathLab Student kit that comes free with your new textbook (if you have a used book, you can purchase access online in Step 3 below or as a standalone kit at your bookstore, but you need a valid Course ID from your instructor). For more information about this website, including system requirements, go to www.mymathlab.com.

On-line Registration

You’ll need:
- Your access code (inside your new textbook, purchased online in step 3, or with a standalone access kit).
- A valid email address
- Your Professor’s Course ID Number: ______________________________
- Your school zip code: ______________________________

2. Click on the Register button below Students
3. Review the Before You Start information to ensure you have everything you need to register; Click Next
4. If you have previously taken a course in CourseCompass, click Yes, Look Me Up and enter your username and password, if you can remember that information. Otherwise, skip this first step leaving No, I am a New User selected.
5. Enter the 6-word access code from your Student Access Kit or inside your textbook, your School’s zip code, then select your Country; click Next.
6. Enter your professor’s Course ID number. Click Next.
7. Fill in all required Personal Information, select your school from the drop-down list, then create your own personal login name & password for this site. Choose a security question (for use if you forget your password) & type the answer. Review the Site License Agreement as desired and click Next.
8. Your Confirmation & Summary screen appears; write down your confirmed login/password (a confirmation email will be sent to you. If you use a Spam email blocker, be sure to allow emails from Pearsoned.com). Click the CourseCompass Log In Now button and use the log in name & password you just created to enter CourseCompass. In the future, you will enter your MyMathLab course from this site, www.coursecompass.com, so it’s a good idea to bookmark this page. You will not have to register again for this course.
9. Under Courses you are taking, click on the Course name to access your professor’s web material.

Important: You MUST install all required software plugins to use this website from a home or work computer. A link to these plugins is located from within the MyMathLab website (run the MyMathLab Installation Wizard often found under Announcements). AOL users must minimize that browser and use Internet Explorer. You must also disable any pop-up blockers for this site only.

Inside MyMathLab

To the left are a series of buttons (they may be called Announcements, Course Documents, etc.). Use these to check for news from your professor, the course syllabus, & to access textbook content. Textbook material (quizzes, videos, etc.) is typically found under Course Documents or Chapter Contents. Your professor may have customized this website, so features & button names may vary. For Technical Support, call Toll Free 1-800-677-6337, Monday through Friday 8AM – 8PM, Sun. 5-PM-12AM EST.
Important Note (Re: MyMathLab): Your CourseCompass course, STA2023: Statistical Methods, shakil31331 has been created. You can access your course from your My CourseCompass page at http://www.coursecompass.com/.

Please save this course information for your records:

**Course ID:** shakil31331  
**Course Name:** STA2023: Statistical Methods  
**Course Materials:** Elementary Statistics 10/e  
**Description:** SPRING 2009