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Conference Hours: Mon. 10:30 a.m. – 12:30 p.m.
Tues. 11:30 – 2:30 & 5:30 – 6:30
Wed. 10:30 – 12:30 & 2:30– 3:30
Thurs. 11:30 a.m. – 12:30 p.m.

SAN JACINTO COLLEGE
DEPARTMENT OF MATH
Syllabus for MATH 1314

- I. COURSE RUBRIC & NUMBER: MATH 1314
- II. COURSE TITLE: College Algebra
- III. COURSE DESCRIPTION: This is a course covering the following topics: algebraic skills, problem-solving/applications, equations and inequalities, graphing, relations and functions (including exponential and logarithmic), systems of equations, and matrices.
- IV. PREREQUISITES AND/OR CO-REQUISITES: Pre- or co-requisites: A grade of C or better in MATH 0306 or MATH level 9.
- V. (STUDENT CREDIT HOUR: LECTURE CONTACT HOURS—LAB CONTACT HOURS):
(3:3-0)
- VI. STUDENT LEARNING OUTCOMES: Upon completion of the course, students will be able to:
 - A. Solve linear, quadratic, rational, radical, literal, and absolute value equations, and solve real world problems from a selection of these types of equations.
 - B. Solve linear, quadratic, rational, and absolute value inequalities.
 - C. Perform matrix operations, including addition, subtraction, scalar multiplication, matrix multiplication, row operations, and finding inverses.
 - D. Use matrix methods to solve systems of equations.
 - E. Use matrices to solve application problems.
 - F. Identify, graph and perform operations with functions. Topics to be included are domain, range, translations, function algebra, composition, inverses, and applications of functions to real world problems.
 - G. Identify, graph and perform operations with exponential and logarithmic functions. Topics to be included are the laws of logarithms, solving logarithmic and exponential equations, and applications of logarithmic and/or exponential equations to real world problems.
 - H. Use technology to enhance algebra concepts.
- VII. GENERAL EDUCATION OUTCOMES:
 - A. READING: Reading at the college level means the ability to analyze and interpret a variety of printed materials;
 - B. WRITING: Competency/outcome in writing is the ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience;
 - C. SPEAKING: Competence in speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience;
 - D. LISTENING: Listening at the college level means the ability to analyze and interpret various forms of spoken communication;
 - E. CRITICAL THINKING: Critical thinking embraces methods for applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies; and

F. **COMPUTER LITERACY:** Computer literacy at the college level means the ability to use computer-based technology in communicating, solving problems, and acquiring information.

VIII. **GRADE RANGE:**

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
Below 60	F

IX. **GRADING FORMULA:** The final letter grade for this course will be based on the following:

It should be noted that enrollment in this course does not guarantee advancement to the next course level. The final responsibility for learning lies with the student.

The final class average will be determined by the following guidelines:

- 4 major exams.....70%
- semester (comprehensive) examination30%

X. **HOMEWORK/TEST MAKE-UP POLICY:** If you are going to miss an exam, you must notify me immediately by email. If you know ahead of time you will miss an exam, let me know. You will be allowed to **make-up only one** exam, excluding the final, for the whole semester.

XI. **ATTENDANCE POLICY:** I will keep attendance. If you must miss class, please keep up with the assignments. **Get the name and number of a classmate** so that you can contact them for any important announcements that may have been made in your absence. If you are going to be absent for more than two class periods in a row, let me know. Please pay attention to the withdrawal deadline of April 16, 2010 as the last day to withdraw with a W. A student who exceeds the excessive absence limit (8.33% of the contact hours of the course) will be awarded a grade of FX. The grade of FX carries the same academic impact as the grade of F.

XII. **CLASS PARTICIPATION POLICY:** I will expect you to be prepared for class. I want you to engage with me and each other in discussions about the material. I will also assign seat work during class which will allow me to assess how well the class is learning the material.

XIII. **CLASSROOM ETIQUETTE:** Please conduct yourself as a responsible adult. Be courteous to your classmates and me. That means **NO** unnecessary talking, this disturbs other students. Please, if you come to class late, or you need to leave early, just be as quiet as possible, thus minimizing class disruption. For cell phones, please put them on vibrate and do not have conversations on them or text on them during class as this is disruptive to other students. During exams, please silence them as their ringing will disrupt other students. **ALWAYS**, be considerate to other students in the class.

The 20 minute Rule: The first 20 minutes of class are very important. This time will be used to go straight into the material needing to be covered for that day. After the first 20 minutes, I will pause to answer homework questions, answer general questions, deal with absences, etc. The first twenty minutes is MY time to get straight into lecture. Thank-you for your cooperation☺

XIV. **WITHDRAWAL POLICY:** Students wishing to drop courses must drop themselves over the web. Faculty will not drop students. Students should consult with a Counselor/Advisor before dropping courses. Students starting college for the first time in fall 2007 or after may only receive six grades of W (grade received from a course dropped after the census date) from all

Texas public colleges and universities attended. Grades of W in developmental courses or courses taken while in high school will not count in the six grades of W. After six grades of W are received, students must receive grades of A, B, C, D, or F in all courses. There are other exemptions from the six-drop limit and students should consult with a Counselor/Advisor before they drop courses to determine these exemptions.

- XV. **REPEAT RULE:** If a course is subject to the repeat rule, a student may take the course two times and pay the regular tuition. The third time, the student will be charged an additional \$50.00 of tuition per credit hour for the third or subsequent time taken.
- XVI. **HONESTY CODE:** As a student at San Jacinto College, you are expected to exhibit honesty, integrity and high standards in your academic work. Members of the college community benefit from an open, honest educational environment. We are all responsible to encourage and promote academic integrity, a code of moral and artistic honesty. Students should refer to the *Student Handbook* for policies and procedures on Cheating and Plagiarism.
- XVII. **EMERGENCY CLOSURE:** In the event the College needs to be closed for any situation, such as inclement weather, students and employees should check the College website at www.sanjac.edu or call **(866) 504-5853** for the most immediate and current information. The College will also engage the emergency notification plan which sends a voicemail, text message, and/or email to each student/employee who opt in. The College will also contact local media but the most reliable, accurate and current information will also be found on the College website or at the toll-free number listed above. Official communications with students is through their SJC email account.
- XVIII. **DISABILITY STATEMENT:** If you have a disability that may affect your ability to learn the material in this course, please contact the Special Populations Director through the counseling office.
- XIX. **TEXTBOOKS/MATERIALS:**

College Algebra, 10th edition, Margaret L. Lial, John Hornsby, David Schneider, Pearson Edu. Inc., 2009.

Course Web Site: I maintain a supplemental web site for this course. It is found at www.mathdoctor1999.com. You will find an enormous amount of helpful resources and information on this site. This is also where you will find my notes that are listed as “LESSONS” in the calendar.

CALENDAR AND PROBLEM SETS FOR MATH 1314

SUGGESTED DAILY WORK PROBLEMS: TENTATIVE CALENDAR (Sometimes may change) The student should work the suggested problems below. After attempting to work the problems, a student having difficulty should seek assistance from his instructor, bringing with him the paper on which the problem was attempted.

Week Section	Topic	Lesson	Page	Problems
1	Review:			
1.1	Linear Equations	3	89	19, 27
1.2	Apps & Modeling		97+	17, 23, 31, 35, 39
1.3	Complex Numbers	1	109+	17, 37, 43, 51, 69, 83

2	1.4	Quadratic Equations	6	119+	15, 27, 31, 37, 45, 51, 57
	1.5	Apps & Modeling		126+	21, 31, 37, 47
	1.6	Other Types of Equations		142	1-25 odd, 29, 45, 51, 57, 63, 65, 71, 75, 77, 83, 93, 97
	1.7	Inequalities	7	154	1-9 odd, 13-33 odd, 37, 39, 45, 53, 59, 65, 69-91 odd, 95
3-4	1.8	Absolute Value Equations and Inequalities	8	163	1-23 odd, 27-51 odd, 61, 73, 81, 85, 89
	2.1	Graphs of Equations	9 & 12	190	3, 5, 11, 15, 21, 23, 27, 29, 37, 45, 47, 51, 53
	2.5	Equations of Lines; Curve Fitting	10 & 11	242	5-25 odd, 31-37 odd, 47-55 odd, 57, 63, 81
	2.2	Circles	12	198	1-9 odd, 13, 15, 19, 25
5		Test #1			
	2.3	Functions	13	213	1-21 odd, 23, 29, 35, 37, 43, 53, 55, 57, 59, 61, 65, 67, 73, 75, 77, 81, 83
	2.6	Graphs of Basic Functions	14	255	1-19 odd, 19, 27, 35, 47, 51
6-7	2.7	Graphing Techniques	14 & 15	270	1, 3, 5, 9, 15, 21, 23-35 odd, 37, 41, 51, 59, 73
	2.4	Linear Functions	17	225	1-11 odd, 25-31 odd, 37, 41, 45, 49, 55, 65
	3.1	Quadratic Functions and Models	17	311	1, 7, 11, 17, 21, 31-39 odd, 53, 55, 57, 65, 75, 77
	3.4	Polynomial Functions	18	351	1-7 odd, 9, 15, 19, 21, 27, 33, 39, 49, 53, 81, 85, 97, 101
	2.8	Function Operations and Composition	15	282	1-17 odd, 23, 25, 27, 29, 37, 41, 43, 47, 53, 65, 73, 77, 91
8		Test #2			
	4.1	Inverse Functions	16	411	1-21 odd, 35, 39, 41, 47, 51-81 odd, 91, 93
9-10	4.2	Exponential Functions	21	427	1, 9, 13-21 odd, 25-31 odd, 43-65 odd, 71-79 odd, 83
	4.3	Logarithmic Functions	21	441	1-9 odd, 13-29 odd, 33-43 odd, 59-87 odd p.445-446 all
	4.4	Evaluating Logarithms and the Change of Base Theorem	22	453	7, 11-35 odd, 45, 47, 49, 51, 61-71 odd, 77, 79
	4.5	Exponential and Logarithmic Equations	22	464	1-55 odd, 59, 71, 73, 75, 79
	4.6	Applications and Models of Exponential Growth and Decay		475	5-13 odd, 19, 21, 23, 27, 29, 35, 37
11-12		Test #3			
	5.1	Systems of Linear Equations (Review)	4	504	13-35 odd, 47-53 odd, 77, 83, 91-95 odd
	5.2	Matrix Solution of Linear Systems	5	518	1-35 odd, 39, 49, 53
13	5.5	Nonlinear Systems of Equations		549	1-39 odd, 49, 53
	5.6	Systems of Inequalities		560	1, 3, 9-29 odd, 47-53 odd, 59
14	5.7	Properties of Matrices		574	1, 11, 13, 19, 27, 29, 32, 33, 37, 41, 43, 45, 49, 57
	5.8	Matrix Inverses		587	1-9 odd, 21-35 odd, 45, 51-67 odd, 75, 81, 82, 87, 89
15		Text #4			
16		Final Exam (Comprehensive)			

To read more about how College Algebra applies to problems arising in other disciplines, as well as the larger world and society, refer to the Index of Applications, page I-1 in your textbook. You will find a list of many applications to astronomy, biology, business, the environment, physics, and other fields.

Supplementary Readings

- Johnson, Mildred, *How to Solve Word Problems in Algebra*, Houghton Mifflin, 1976.
- Poage, Arendsen, Wegener, *Critical Thinking Approach to Beginning Algebra*, 1989.
- Poage, Arendsen, Wegener, *Critical Thinking Approach to Intermediate Algebra*, 1989.
- Sullivan, Michael, *Algebra Review*, Prentice Hall, 1996.

Supplementary and Reference Materials

Each of the following is available in the math lab.

- *Student Solutions Manual*, Addison Wesley
- Software: *MyMathLab* which includes reading quizzes, chapter quizzes and tests (included in text package)
- *Video tapes*, Addison Wesley.

Supplementary Internet/Websites

www.aw.com/tutorcenter