South Plains College
Mathematics Department
College Algebra – MATH 1324
Course Syllabus – Fall 2017

Instructor: Karol Albus
Office: M109 Levelland Campus Math Building
Telephone: (806)-716-2543
Email: kalbus@southplainscollege.edu (preferred method of contact)
Office hours: Monday: 11:00-2:00, Tuesday: 9:45-10:45, Thursday: 9:45-10:45, Friday: 9:00-12:00 Other times by appointment.

Disclaimer: The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor, and will announce any changes in class.

Please check your email regularly as it is they only way I have to contact you outside of class.

Course Description: MATH 1324 – Mathematics for Business and Social Sciences (3:3:0) Prerequisite: Two units of high school algebra or MATH 0320. The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value.

Student Learning Outcomes/Competencies:
1. Identify, evaluate, characterize and graph linear, polynomial, rational, exponential and logarithmic functions. (1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6)
2. Determine the domain of a function. (2.1)
3. Set up and solve linear business functions: cost, revenue, profit (1.1)
4. Set up and solve problems involving break-even points (1.1)
5. Set up and solve problems involving equilibrium points. (1.2)
6. Use business formulas to calculate simple and compound interest. (2.5, 3.1, 3.2)
7. Use business formulas to calculate effective rates. (3.2)
8. Use business formulas to evaluate annuities. (3.3, 3.4)
9. Solve systems of equations by substitution, elimination, Gauss-Jordan elimination and matrix inversion. (4.1, 4.3, 4.6)
10. Analyze the nature of the solution to a system of equations. (4.1)
11. Apply the use of technology to perform matrix operations, find the inverse of a matrix, and solve systems of equations. (4.2, 4.4, 4.5)
12. Set up and solve applications involving systems of equations. (4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7)
13. Use graphical methods to solve linear programming problems. (5.3)
14. Use the Simplex Method to solve linear programming problems. (6.1, 6.2, 6.3, 6.4)
15. Set up and solve applications involving linear programming problems. (5.3, 6.1, 6.2, 6.3, 6.4)
16. Simplify and factor algebraic expressions involving polynomials, rational expressions, exponents, and radicals. (A.2, A.3, A.4, A.5, A.6)
17. Solve linear, quadratic, exponential, logarithmic and rational equations. (1.1, 2.3, 2.4, 2.6, A.7)

Textbook: The textbook required for this course is **College Mathematics for Business, Economics, Life Sciences, and Social Sciences** by Barnett, Ziegler, and Byleen 13th edition published by Pearson. A 12th edition is completely fine. You will NOT need the MyMathLab code.

Supplies: You will need a 3 ring binder (1.5 inch), dividers, paper, graph paper, hole punch, textbook, pencils, and erasers. **You will need a TI-83 or I-84 calculator.** These are pretty basic supplies, but you will need to bring them to each class. **I require pencil on all work.** You will have one warning, and after that, you will earn a zero on that work.

Assignment Policy: Homework will be assigned at each class meeting. The homework is not a tool by which I torture you, but rather an opportunity for you to practice the skills presented in class which you will be responsible to demonstrate on a quiz the following class period. If you are interested in passing the class, you will need to do well on the quizzes. To do well on the quizzes, you will need to complete the homework. **No late assignments will be accepted.** You should show all work when doing homework. Simply writing the problem and the answer is not "doing homework." Using a solutions manual or an app that shows you the steps, and copying them down is NOT "doing homework." **Remember your effort is key to your success. You have to focus your effort on being able to complete the problems on a quiz/exam without any outside resources.** Some days you will turn in your homework when you take a quiz. 50% of your grade will be from the homework and 50% from the quiz. Keep all class materials (notes, handouts, homework, quizzes, and exams) organized in a notebook (3-ring binder). These materials are subject to be turned in for grading at any time. Please make certain all materials accompany you to each class meeting.

Attendance: Attendance and effort are the most important activities for success in this course. Class attendance may be taken at any time during the class period, so please do not be late or leave early. Leaving early and being tardy will be considered ½ absence. **You may be dropped from this course with a grade of X or F if you are absent four consecutive classes or if you exceed five absences (for any reason) throughout the semester.** If you should incur an absence, please refer to your syllabus, blackboard, contact the instructor, or contact another student to get the assignment completed BEFORE the next class. **Late homework and makeup quizzes are not an option.** Make ups for **Exams** will only be provided under extreme, documented circumstances. If at all possible, the instructor should be notified prior to the exam day.

Grading: Daily work (homework, quizzes, notebook) will count for 16% of the final grade. Expect four major exams (16% each) throughout the course and a **comprehensive** final exam (20%) at the end of the course. **Remember that no late or makeup work will be accepted. If you are not in class you will earn a grade of 0 for homework/quiz on that day.** Your final average in the course will determine the letter grade posted on your transcript. This grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

Grade Reporting: Grades will be posted on blackboard. If you think I have recorded a grade incorrectly, please notify me immediately. I keep a hard copy of my grades and will be glad to check it and correct it if necessary. I usually update my grades once a week or every other week.

Phones and other electronics: All electronic devices are inappropriate. Suspected use will earn you a zero for that day's quiz or homework. If you use an electronic device (cell phone, iPad, iPod, headphones) during an exam, you will earn a zero on the exam and may be dropped from the course. Please do not use a phone or iPad as your book or calculator.

Test days: Once you begin the exam, you will not be allowed to leave the classroom until the exam is submitted for grading. Use the restroom before class. Use of electronics during an exam earns you a zero on the exam and possible dismissal from the course.

Where to Get Help:
- Me! – My office hours are listed at the top of this syllabus. I am also available at some other times by appointment. Email is a great way to contact me – much faster than phone calls and messages. Sometimes I can help on email if you will send a photo of the problem you are doing. Even if I am not in the office, I can work the problem, take a photo and send back. You CANNOT ask for #35 – I won't have my book with me.
- Free tutoring is available in M116 on the Levelland campus. The hours for tutors are posted by that door.
- Occasionally I will post helpful items on blackboard such as solution sets. **If you are not familiar with Blackboard, you should become familiar**. Login at http://spc.blackboard.com. The user name and password should be the same as the MySPC and SPC email.
    User name: first initial, last name, and last 4 digits of the Student ID

Password: Original CampusConnect Pin No. (found on SPC acceptance letter) Questions regarding Blackboard support may be emailed to blackboard@southplainscollege.edu or call 806-716-2180.

- Your book is a great resource and it is already purchased!
- You can also seek videos from www.patrickjmt.com and www.khanacademy.org or others.
- **I also strongly recommend forming study groups so that you can work with others. Networking is an essential tool both in the classroom and in the workforce.**

You should expect to spend time outside of class practicing homework problems and studying. The goal is for you to acquire the skills necessary to be successful in your next MATH course. I WILL NOT send you to the next course if you cannot demonstrate that you have those skills.

Communication Skills: effective development, interpretation, and expression of ideas through written, oral, and visual communication.

Develop, interpret, and express ideas through written communication
Develop, interpret, and express ideas through oral communication
Develop, interpret, and express ideas through visual communication

Critical Thinking: creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.

Generate and communicate ideas by combining, changing, and reapplying existing information
Gather and assess information relevant to a question
Analyze, evaluate, and synthesize information

Empirical and Quantitative Competency Skills: the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Manipulate and analyze numerical data and arrive at an informed conclusion
Manipulate and analyze observable facts and arrive at an informed conclusion

Disability: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) & Lubbock Center 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Non-Discrimination Statement South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College - 1401 College Avenue, Box 5, Levelland, TX 79336, 806-894-9611

Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the SPC policy at:
(http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php)
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

Math for Business and Social Sciences Tentative Course Outline
Mon/Wed MATH 1324.001 (9:30-10:45)
Fall 2017

Week	Day	Date	Lesson / Tentative Assignment
1	Mon	Aug 28	Syllabus/ Review Assignment 1 (1.1) Linear Equations and Inequalities
	Wed	Aug 30	Assessment Assignment 2 (1.2) Graphs and Lines
2	*Mon*	*Sept 4*	*Labor Day Holiday*
	Wed	Sept 6	Assignment 3 (2.1) Functions
3	Mon	Sept 11	Assignment 4 (2.3) Quadratic Functions
	Wed	Sept 13	Assignment 5 (2.3) Quadratic Function Applications
4	Mon	Sept 18	Assignment 6 Review
	Wed	**Sept 20**	**Exam 1**
5	Mon	Sept 25	Assignment 7 (2.5)(2.6) Exponential and Logarithmic Functions
	Wed	Sept 27	Assignment 8 (2.5)(2.6) Solving Exponential/Logarithmic Equations
6	Mon	Oct 2	Assignment 9 (3.1) Simple Interest
	Wed	Oct 4	Assignment 10 (3.2) Compound and Continuous Interest
7	Mon	Oct 9	Assignment 11 (3.3) Future Value of an Annuity; Sinking Funds
	Wed	Oct 11	Assignment 12 (3.4) Present Value of an Annuity; Amortization
	Friday	*Oct 13*	*Fall Break*
8	Mon	Oct 16	Review
	Wed	**Oct 18**	**Exam 2**
9	Mon	Oct 23	Assignment 13 (4.1) Solving Systems by Graphing, Substitution and Elimination
	Wed	Oct 25	Assignment 14 (4.2)Systems of Linear Equations and Augmented Matrices
10	Mon	Oct 30	Assignment 15 (4.3) GJE Program
	Wed	Nov 1	Assignment 16 (4.3) Applications of Systems of Equations
11	Mon	Nov 6	Assignment 17 (4.4, 4.5, 4.6) Everything else Matrix
	Wed	**Nov 8**	**Exam 3**
12	Mon	Nov 13	Assignment 18 (5.1) Linear Inequalities in 2 Variables (5.2) Systems of Linear Inequalities
	Mon	*Nov 13*	*Online Registration for Spring 2018 Opens*
	Wed	Nov 15	Assignment 19 (5.3) Linear Programming in 2 Dimensions
	Thurs	*Nov 16*	*Last Day to Drop a Class*
13	Mon	Nov 20	Assignment 20 (6.1) The Table Method: Intro to Simplex (6.2) The Simplex Method: Maximization
	Wed	*Nov 22*	*Thanksgiving Holiday*
14	Mon	Nov 27	Assignment 21 (6.3) Simplex Method: Minimization
	Wed	Nov 29	Review
15	**Mon**	**Dec 4**	**Exam 4**
	Wed	Dec 6	Comprehensive Review and Question Day
16	**Wed**	**Dec 13**	**Finals**
			MATH1324.001 December 13 (Wed) 8:00-10:00

Math for Business and Social Sciences Tentative Course Outline
Tues/Thurs MATH 1324.003 (11:00-12:15), 1324.004 (1:00-2:15)
Fall 2017

Week	Day	Date	Lesson / Tentative Assignment
1	Tues	Aug 29	Syllabus/ Review Assignment 1 (1.1) Linear Equations and Inequalities
	Thurs	Aug 31	Assessment Assignment 2 (1.2) Graphs and Lines
	Mon	*Sept 4*	*Labor Day Holiday*
2	Tues	Sept 5	
	Thurs	Sept 7	Assignment 3 (2.1) Functions
3	Tues	Sept 12	Assignment 4 (2.3) Quadratic Functions
	Thurs	Sept 14	Assignment 5 (2.3) Quadratic Function Applications
4	Tues	Sept 19	Assignment 6 Review
	Thurs	**Sept 21**	**Exam 1**
5	Tues	Sept 26	Assignment 7 (2.5)(2.6) Exponential and Logarithmic Functions
	Thurs	Sept 28	Assignment 8 (2.5)(2.6) Solving Exponential/Logarithmic Equations
6	Tues	Oct 3	Assignment 9 (3.1) Simple Interest
	Thurs	Oct 5	Assignment 10 (3.2) Compound and Continuous Interest
7	Tues	Oct 10	Assignment 11 (3.3) Future Value of an Annuity; Sinking Funds
	Thurs	Oct 12	Assignment 12 (3.4) Present Value of an Annuity; Amortization
	Fri	*Oct 13*	*Fall Break*
8	Tues	Oct 17	Review
	Thurs	**Oct 19**	**Exam 2**
9	Tues	Oct 24	Assignment 13 (4.1) Solving Systems by Graphing, Substitution and Elimination
	Thurs	Oct 26	Assignment 14 (4.2)Systems of Linear Equations and Augmented Matrices
10	Tues	Oct 31	Assignment 15 (4.3) GJE Program
	Thurs	Nov 2	Assignment 16 (4.3) Applications of Systems of Equations
11	Tues	Nov 7	Assignment 17 (4.4, 4.5, 4.6) Everything else Matrix
	Thurs	**Nov 9**	**Exam 3**
12	*Mon*	*Nov 13*	*Online Registration for Spring 2018 Opens*
12	Tues	Nov 14	Assignment 18 (5.1) Linear Inequalities in 2 Variables (5.2) Systems of Linear Inequalities
	Thurs	Nov 16	Assignment 19 (5.3) Linear Programming in 2 Dimensions
	Thurs	*Nov 16*	*Last Day to Drop a Class*
13	Tues	Nov 21	Assignment 20 (6.1) The Table Method: Intro to Simplex (6.2) The Simplex Method: Maximization
	Thurs	*Nov 23*	*Thanksgiving Break*
14	Tues	Nov 28	Assignment 21 (6.3) Simplex Method: Minimization
	Thurs	Nov 30	Review
15	**Tues**	**Dec 5**	**Exam 4**
	Thurs	Dec 7	Comprehensive Review and Question Day
16		**Dec 11-14**	**Finals**
			MATH1324.003 December 12 (Tues) 10:15-12:15
			MATH1324.004 December 14 (Thurs) 10:15-12:15