South Plains College
MATH 1324 –Math Analysis I
Spring 2018- Course Syllabus

Instructor: César Sánchez
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Textbook: College Mathematics for business, economics, life sciences, and social sciences 13th edition

by Barnett, Ziegler, byleen   Course id: sanchez54576

www.coursecompass.com

Topics include inequalities, progressions, relations, functions, systems of equations, matrices, linear programming, compound interest and annuities. The purpose/rationale/goal of this course is to introduce students to the fundamental principles in business mathematics including functions, systems of equations, linear programming, and financial math and to prepare students to study Mathematical Analysis II.

Core Objectives:
Communication Skills:
- 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:
- 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:
- Manipulate and analyze numerical data and arrive at an informed conclusion
- Manipulate and analyze observable facts and arrive at an informed conclusion

Student Learning Outcomes/Competencies
1.1. 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)
1.2. determine the domain of a function. (2.1)
1.3. set up and solve linear business functions: cost, revenue, profit. (1.1,)
1.4. set up and solve problems involving break -even points. (1.1)
1.5. set up and solve problems involving equilibrium points. (1.2)
1.6. use business formulas to calculate simple and compound interest. (2.5, 3.1, 3.2)
1.7. use business formulas to calculate effective rates. (3.2)
1.8. use business formulas to evaluate annuities. (3.3, 3.4)

1.9. solve systems of equations: by substitution, elimination, Gauss-Jordan elimination and matrix inversion. (4.1, 4.3, 4.6)

1.10.   analyze the nature of the solution to a system of equations. (4.1)

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)

1.12.   set up and solve applications involving systems of equations. (4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7)

1.13.   use graphical methods to solve linear programming problems. (5.3)

1.14.   use the Simplex Method to solve linear programming problems. (6.1, 6.2, 6.3, 6.4)

1.15.   set up and solve applications involving linear programming problems. (5.3, 6.1, 6.2, 6.3, 6.4)

1.16. simplify and factor algebraic expressions involving polynomials, rational expressions, exponents, and radicals. (A.2, A. 3, A .4, A.5, A.6)

1.17. solve linear, quadratic, exponential, logarithmic and rational equations. (1.1, 2.3, 2.4, 2.6, A.7)

Expectations:
 • Read the syllabus.
• Attend class, arrive on time, do your homework, turn in homework ON TIME, and be prepared to participate.
• **TURN OFF and PUT AWAY** all cell phones and mp3 players when you enter the classroom and keep off for the duration of the class. Do **NOT** send or receive text messages during class.
• Maintain a classroom environment that is conducive to learning.
• Foster a spirit of complete honesty and a high standard of integrity. For more detail, see page 23 of the South Plains College General Catalog.

Attendance: Record of your attendance will be maintained throughout the semester. You may be dropped from this course with a grade of X or F if you exceed three absences throughout the semester. **Absences are not classified as 'excused' or 'unexcused'.**

TSI: The Texas Success Initiative (TSI) is a state program designed to ensure that all Texas institutions provide placement testing, personal advisement and appropriate instruction to students to enhance their opportunities for success in their college studies. All new students entering Texas colleges and universities are required to take a placement test prior to enrolling in college-level courses, unless exempt from testing under specified state standards (i.e., scores on ACT, SAT or TAKS). Testing will indicate whether a student possesses adequate basic college level skills in reading, writing and mathematics necessary to begin an undergraduate program of study. (copied from the current SPC catalog)

You will need a graphing calculator for this course (cannot use the nspire, ti-89 or anything equivalent). I recommend either a ti-83 or ti-84

Grading:
Homework 35%
Exams 50%
Final Exam 15%
Grading Scale:
A 90-100

B 80-89
C 70-79
D 60-69
F 59 or below

Homework:
 • All homework is online and due at midnight of the week it is assigned. No late homework is accepted for any reason.

Tutoring: Free tutoring and video tapes are available in Room 116 of the Math Building. Digital versions of these tutorial videos can be viewed on your personal computer. There is a link for these videos on blackboard **http://spc.blackboard.com**

Exams: There will be 3 exams and a comprehensive departmental final exam . Dates will be announced in class 1 week prior. If for any reason you are unable to take an exam at the designated time you must contact me prior to class time. Make-up exams will be given at the discretion of the instructor. Any person who knows they will be absent on a day of an exam should make arrangements to take the exam at an EARLIER date.

Equal Opportunity: South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability or age.

4.1.1.1 Diversity Statement
In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

4.1.1.2 Disabilities Statement
Levelland Campus – 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 to federal law, a student requesting accommodations must provide acceptable documentation of his/her disability. For more information, call or visit the Disability Services Office in the Student Services Building, 806-716-2577.
Reese Center and the Byron Martin Advanced Technology Center (ATC) –Rooms 809 and 811, Reese Center Building 8, 806-716-4675.

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.

"Insanity is doing the same thing, over and over again, but expecting different results."

~Albert Einstein