



Course Syllabus – Co-requisite Contemporary Mathematics

MATH 0332.003 & MATH 1332.007 – Fall 2018

Department: Mathematics and Engineering

Instructor: Denise Johansen

Discipline: Mathematics

Office: RC 223D; (806)716-4632

Cell/Text: (513)227-0095

Email: djohansen@southplainscollege.edu

Course Number: Math 0332/1332

Course Titles: Contemporary Mathematics Support Course/Contemporary Mathematics

Credit MATH 0332: 3 **Lecture:** 3 **Lab:** 0

Credit MATH 1332: 3 **Lecture:** 3 **Lab:** 0

Time/Place: MTWR 2:30pm-3:45pm/RC 227

Office Hours: MTWR 11am-12pm, TR 6pm-7pm, F 9am-12pm, or by appointment

Prerequisites (MATH0332): Math level 6, Reading level 7

Co-requisite (MATH1332): MATH1332

Prerequisites (MATH1332): A grade of C or better is required from MATH0332, MATH0337, or MATH0320).

Course Description (MATH 0332): The Contemporary Mathematics support course is the study of the basic algebraic concepts necessary for success in MATH1332, to include order of operations, exponent rules, polynomials, radical expressions, and the solution of equations and inequalities. This course is not applicable toward any degree.

Course Description (MATH 1332): This course is designed specifically for those students who will terminate their mathematical training with one or two courses in mathematics. It includes the fundamentals and principles of algebra; introduction to geometry and trigonometry; use of graphs, proportions, percentages, and logarithms; and heavy emphasis on applications.

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Student Learning Outcomes/Competencies:

MATH0332

Upon completion of this course and receiving a passing grade, the student will be able to:

1. Add, subtract, multiply, and divide real numbers. (1.1, 1.2, CH 2, 5)
2. Use order of operations to evaluate expressions. (1.3)
3. Understand the basics of geometric concepts. (17.1, 17.2, CH 18)
4. Simplify and perform operations with radical expressions. (CH 12)
5. Solve linear equations and equalities of a single variable. (CH 7)
6. Solve quadratic equations by factoring and quadratic formula. (CH 13, 15)
7. Graph linear equations functions. (CH 9)
8. Understand the basics of statistical concepts. (CH 6)

MATH1332

Upon completion of the course, students will be able to:

1. Apply the arithmetic of real numbers and the concepts of ratio and proportion, percent, variation, and measure to practical problems. (CH 3, 4, 8)
2. Be able to manipulate polynomial, radical, exponential, and logarithmic expressions. (CH 11, 12, 16)
3. Find the solution set for linear equations in one or two variables, quadratic equations in one variable, and exponential equations in one variable, and apply these techniques to practical problems. (CH 7, 13, 15, 16.1)
4. Find the solution to a 2x2 system of linear equations, and apply this technique to practical problems. (CH 10)
5. Recognize different geometric shapes and calculate area and volume. (17.2, 17.3, 17.4)
6. Use the six trigonometric functions to solve right triangles and oblique triangles, and be able to apply these techniques to practical problems. (CH 19, 20)
7. Organize statistical data, depict the data graphically, and find measures of central tendency, variation, and position. Solve simple probability and counting problems. (CH 6)

Core Objectives:

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

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- 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

Physical Textbook (Optional): *College Mathematics*, Cheryl Cleaves and Margie Hobbs, 2019, 10th Edition, Prentice Hall/Pearson Education.

Supplies (Required): MyMathLab access required (Course ID: **johansen03575**); a non-graphing scientific calculator (such as a TI-30) that is NOT your phone will be allowed on most activities.

Technology Required:

Working, reliable internet access

MyMathLab website. Login at MyMathLab.com

Course Requirements: To maximize the potential to complete this course, a student should attend all class meetings, take notes and participate in class, login to MyMathLab at least 3 times a week, read the required textbook sections, watch the required lecture videos, thoroughly complete all homework assignments, and prepare well for examinations including final examinations.

Contacting Your Instructor: I am available by phone or face-to-face visit in my office on the Reese campus during my posted office hours; you can email me at any time. I can also be reached by phone or text using my cellphone number (513-227-0095) during reasonable hours. If you have to leave a message, my response time is 1 business day or less.

Learning Materials/Activities: To be successful in this course, you will use the following materials and complete the given activities for each section of the textbook that we will cover.

- Textbook reading – Read the section in your textbook, whether you use a physical book or the eText inside MyMathLab. As you read, you should write notes on any new vocabulary words (usually in boldface type), formulas, theorems, and calculator commands. The reading may be your first introduction to the concepts.
- Explore assignment - Explore assignments for each section will be posted in MyMathLab under the Assignments button and will contain video lectures and vocabulary/concept check questions. As you view the videos/animations, you should add any new information to your textbook notes and copy into your notes any examples worked for you in the video, just as if you were sitting in class with that

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instructor. The exploration assignment is like a guided practice—concepts are still very new, but you should be getting more familiar with them.

- In-Class assignment – On most days that we meet for class, we will take some time to practice what you've learned and/or to apply the concepts to lab exercises.
- Homework assignment – Homework assignments for each section will be posted in MyMathLab under the Assignments button and will contain questions that may be multiple choice or fill-in-the-blank, but are primarily open-ended questions for problems that you work out. The questions generally give you 3 chances to get the question right before marking the problem wrong. You will then have access to a Similar Question button that will give you a new question and 3 more chances to get the question right. You have unlimited attempts on homework questions, so if you are persistent, do your work on time, and learn from your mistakes, you can earn 100% on all homework assignments. Also, every homework question has a Question Help button in the top right corner that will walk you through the solution, show you a similar example, link to the textbook section, sometimes links to a video example, or gives you a button to Ask My Instructor which sends me an email with your question. The purpose of homework is to practice, practice, practice! This is where you actually are learning the concepts, not just watching someone else work problems.

Course Evaluation:

- Daily Explore assignments will be posted, worth 5% of your grade. These are due before the class where the section will be discussed.
- There will be in-class assignments collected daily. By their very nature, in-class assignments can NOT be made up. The in-class average is worth 10% of your grade, and the lowest 4 in-class grades will be dropped.
- Daily online homework assignments will be due weekly, usually on Sunday nights. The homework average is worth 10% of your grade, and the lowest 5 homework grades will be dropped.
- There will be 6 in-class hour exams. These will each be worth 10% of your grade.
- There will be 1 in-class cumulative final exam on **Monday, December 10th from 1pm-3pm**, worth 15% of your grade.
- **Late work:** Late work on Explore and Homework assignments will be accepted in MyMathLab with a 10% deduction **per day** late. This means that if an assignment has 10 questions, and you get 9 of them correct and on time, you earned a 90% on the assignment. If you get the same 9 of them correct, but 2 days late, you have earned 80% of 90%, which is only 72%. PLEASE do your assignments on time; don't shoot yourself in the foot!

Grading Policy:

Explore average	5%
Homework average	20%
Exams (6*10%)	60%
Final exam	15%

Letter Grades:

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
59% & below	F

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How your work is graded: MyMathLab grades online assignments as a percentage based on how many parts of a question were answered correctly, and these grades are immediately included in your class average and in your MyMathLab Gradebook. For the In-Class assignments and Exams that I grade, I give a percentage of points based on how many parts of the question were answered correctly. I will upload In-Class and Exam grades into MyMathLab within 48 hours of their due dates, and MyMathLab will update your Gradebook and current class average to include those scores.

Response times for grading:

- Explore/Homework - Graded immediately by MyMathLab, reviewed by me within 1 business day if you contact me with a specific question/issue.
- In-Class - Graded by me and returned to you, usually by the next class meeting.
- Exams - Graded by me within 48 hours.

Attendance Policy: Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus. *[Absences for this course are considered excessive if you have 6 in a row or a total of 9. If you reach 6 consecutive absences or a total of 9 absences, you will be administratively withdrawn from the class with a grade of 'X' or 'F'.]*

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first class meeting.

Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.

Last day to drop is Thursday, November 15th.

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SPC School Holidays:

Monday, 9/3, Labor Day

Friday, 10/12, Fall Break

Wednesday-Friday, 11/21-11/23, Thanksgiving Break

Academic Integrity: It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.

Cheating: Dishonesty of any kind on examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the textbook or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in an office are examples of cheating. Complete honesty is required of the student in the presentation of any and all phases of course work. This applies to quizzes of whatever length, as well as to final examinations, to daily reports and to term papers. Students caught cheating will receive a 0 on that assignment and face disciplinary action that can include being dropped from the class with a grade of 'F' and suspension from school.

Cell Phones: Cell phones must be put away and turned to silent mode or off for the duration of class.

Dress Code: Reasonable standards of decency apply to the college community. The student should dress in a manner which does not distract from the academic atmosphere. Revealing attire or clothing carrying obscene or offensive slogans is not permitted. In all academic buildings, classrooms, offices, the Student Center, and dining facilities, students are required to wear shirts and shoes.

Language: Please be respectful of others and use language that is appropriate to the workplace.

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.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Special 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 Special Services Coordinator. For more information, call

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or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611. The Disability Services website is at <http://www.southplainscollege.edu/health/disabilityservices.php>, and email is dvalles@southplainscollege.edu.

Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact Chris Straface, Director of Health and Wellness at 806-716-2362 or email cstraface@southplainscollege.edu for assistance.

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. Phone number 806-716-2360.

Campus Concealed Carry Statement: 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 and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.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.

COURSE OUTLINE / CALENDAR*

Problems are assigned online for each section of the textbook that we cover. To access online assignments, you must have an access code (you can buy a code for MyMathLab bundled with your textbook or you can buy just the code at www.mymathlab.com) and register for our course (Course ID: **johansen03575**) at www.mymathlab.com. Assignments have due dates, and you will lose 10% per day for work completed after the due date passes. To master the material and prepare for the exams, you **MUST** work extra problems!

* Assignments and deadlines are subject to change at instructor's discretion, and all changes will be announced in class and posted in MyMathLab.

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Date	Content	Assignments
Week 1 8/27 8/28 8/29 8/30	Syllabus, Review of Basic Concepts, & Review of Fractions <ul style="list-style-type: none"> • Syllabus Overview • 1.1 Basic Operations with Whole Numbers and Decimals • 1.2 Exponents, Roots, and Powers of 10 • 1.3 Order of Operations and Problem Solving • 2.1 Multiples and Factors • 2.2 Equivalent Fractions and Decimals • 2.3 Adding and Subtracting Fractions and Mixed Numbers • 2.4 Multiplying and Dividing Fractions and Mixed Numbers 	Read Sections 1.1-1.3, 2.1-2.4 MML Orientation MML Explore 1.1-1.3, 2.1-2.4 MML Hwk 1.1-1.3, 2.1-2.4 Due 11:59pm, 9/3
Week 2 9/3 9/4 9/5 9/6	Labor Day, Percents, & Exam 1 <ul style="list-style-type: none"> • Labor Day Holiday – No Classes! • Percent and Number Equivalents • Percentage Problems • Increase and Decrease • Review for Exam 1 • Exam 1 (Chapters 1-3) 	Read Sections 3.1-3.3 MML Explore 3.1-3.3 MML Hwk 3.1-3.3 Due 11:59pm, 9/6
Week 3 9/10 9/11 9/12	Measurement & Signed Numbers and Powers of 10 (Part 1) <ul style="list-style-type: none"> • The U.S. Customary System of Measurement • Introduction to the Metric System • Time, Temperature, and Other Measures • Metric-U.S. Customary Comparisons • Adding Signed Numbers • Subtracting Signed Numbers 	Read Sections 4.1-4.4, 5.1-5.4 MML Explore 4.1-4.4, 5.1-5.4 MML Hwk 4.1-4.4, 5.1-5.4 Due 11:59pm, 9/16

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Date	Content	Assignments
Week 3 (Cont.) 9/13	<ul style="list-style-type: none"> • Multiplying and Dividing Signed Numbers • Signed Rational Numbers 	
Week 4 9/17 9/18 9/19 9/20	<p>Signed Numbers and Powers of 10 (Part 2) & Statistics</p> <ul style="list-style-type: none"> • Powers of 10 • Scientific Notation • Reading Circle, Bar, and Line Graphs • Measures of Central Tendency • Measures of Dispersion • Counting Techniques and Simple Probabilities 	<p>Read Sections 5.5-5.6, 6.1-6.4 MML Explore 5.5-5.6, 6.1-6.4 MML Hwk 5.5-5.6, 6.1-6.4 Due 11:59pm, 9/23</p>
Week 5 9/24 9/25 9/26 9/27	<p>Exam 2; Linear Equations; & Formulas, Proportion, and Variation (Part 1)</p> <ul style="list-style-type: none"> • Review for Exam 2 • Exam 2 (Chapters 4-6) • Variable Notation • Solving Linear Equations • Solving Linear Equations with Fractions and Decimals by Clearing Denominators • Formulas 	<p>Read Sections 7.1-7.3, 8.1 MML Explore 7.1-7.3, 8.1 MML Hwk 7.1-7.3, 8.1 Due 11:59pm, 9/30</p>
Week 6 10/1 10/2	<p>Formulas, Proportion, and Variation (Part 2); Linear Equations and Functions in Two Variables; & Systems of Linear Equations and Inequalities (Part 1)</p> <ul style="list-style-type: none"> • Proportion • Direct and Joint Variation • Inverse and Combined Variation • Graphical Representation of Linear Equations and Functions • Graphing Linear Equations in Two Variables Using Alternative Methods 	<p>Read Sections 8.2-8.4, 9.1-9.4, 10.1-10.2 MML Explore 8.2-8.4, 9.1-9.4, 10.1-10.2 MML Hwk 8.2-8.4, 9.1-9.4, 10.1-10.2 Due 11:59pm, 10/7</p>

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Date	Content	Assignments
Week 6 (Cont.) 10/3 10/4	<ul style="list-style-type: none"> • Slope • Linear Equation of a Line • Solving Systems of Linear Equations and Inequalities Graphically • Solving Systems of Linear Equations Using the Addition Method 	
Week 7 10/8 10/9 10/10 10/11	<p>Systems of Linear Equations and Inequalities (Part 2), Exam 3, & Powers and Polynomials (Part 1)</p> <ul style="list-style-type: none"> • Solving Systems of Linear Equations Using the Substitution Method • Problem Solving Using Systems of Linear Equations • Review for Exam 3 • Exam 3 (Chapters 7-10) • Laws of Exponents • Polynomials 	Read Sections 10.3-10.4, 11.1-11.2 MML Explore 10.3-10.4, 11.1-11.2 MML Hwk 10.3-10.4, 11.1-11.2 <p style="text-align: right;">Due 11:59pm, 10/15</p>
Week 8 10/15 10/16 10/17 10/18	<p>Powers and Polynomials (Part 2), Roots and Radicals, & Factoring (Part 1)</p> <ul style="list-style-type: none"> • Basic Operations with Polynomials • Irrational Numbers and Real Numbers • Simplifying Irrational Expressions • Basic Operations with Square-Root Radicals • Complex and Imaginary Numbers • The Distributive Property and Common Factors • Factoring Special Products 	Read Sections 11.3, 12.1-12.4, 13.1-13.2 MML Explore 11.3, 12.1-12.4, 13.1-13.2 MML Hwk 11.3, 12.1-12.4, 13.1-13.2 <p style="text-align: right;">Due 11:59pm, 10/21</p>
Week 9 10/22 10/23 10/24	<p>Factoring (Part 2), Exam 4, & Quadratic Equations (Part 1)</p> <ul style="list-style-type: none"> • Factoring General Trinomials • Review for Exam 4 • Exam 4 (Chapters 11-13) 	Read Sections 13.3, 15.1-15.2 MML Explore 13.3, 15.1-15.2 MML Hwk 13.3, 15.1-15.2 <p style="text-align: right;">Due 11:59pm, 10/28</p>

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Date	Content	Assignments
Week 9 (Cont.) 10/25	<ul style="list-style-type: none"> • Solving Quadratic Equations by the Square-Root Method • Solving Quadratic Equations by Factoring 	
Week 10 10/29 10/30 10/31 11/1	<p>Quadratic Equations (Part 2) & Exponential and Logarithmic Equations (Part 1)</p> <ul style="list-style-type: none"> • Solving Quadratic Equations by Completing the Square or Using the Formula • Graphing Quadratic Functions • Exponential Expressions, Equations, and Formulas • Logarithmic Expressions, Equations, and Formulas 	<p>Read Sections 15.3-15.4, 16.1-16.2 MML Explore 15.3-15.4, 16.1-16.2 MML Hwk 15.3-15.4, 16.1-16.2 Due 11:59pm, 11/4</p>
Week 11 11/5 11/6 11/7 11/8	<p>Logarithmic Equations (Part 2), Exam 5, & Geometry (Part 1)</p> <ul style="list-style-type: none"> • Applications of Exponential and Logarithmic Functions • Review for Exam 5 • Exam 5 (Chapters 15-16) • Lines and Angles 	<p>Read Section 17.1 MML Explore 17.1 MML Hwk 17.1 Due 11:59pm, 11/11</p>
Week 12 11/12 11/13 11/14 11/15	<p>Geometry (Part 2) & Triangles (Part 1)</p> <ul style="list-style-type: none"> • Polygons • Circles and Radians • Volume and Surface Area • Special Triangle Relationships 	<p>Read Sections 17.2-17.4, 18.1 MML Explore 17.2-17.4, 18.1 MML Hwk 17.2-17.4, 18.1 Due 11:59pm, 11/18</p>
Week 13 11/19 11/20	<p>Triangles (Part 2), Right-Triangle Trigonometry (Part 1), & Thanksgiving Break</p> <ul style="list-style-type: none"> • Pythagorean Theorem • Trigonometric Functions 	<p>Read Sections 18.2, 19.1 MML Explore 18.2, 19.1 MML Hwk 18.2, 19.1 Due 11:59pm, 11/25</p>

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Date	Content	Assignments
Week 13 (Cont.) 11/21- 11/23	<ul style="list-style-type: none"> • Thanksgiving Holidays – No Classes! 	
Week 14 11/26 11/27 11/28 11/29	<p>Right-Triangle Trigonometry (Part 2), Exam 6, & Trigonometry with Any Angle (Part 1)</p> <ul style="list-style-type: none"> • Solving Right Triangles Using the Sine, Cosine, and Tangent Functions • Review for Exam 6 • Exam 6 (Chapters 17-19) • Trigonometric Functions for Any Angle 	<p>Read Sections 19.2, 20.2 MML Explore 19.2, 20.2 MML Hwk 19.2, 20.2 Due 11:59pm, 12/2</p>
Week 15 12/3 12/4 12/5 & 12/6	<p>Trigonometry with Any Angle (Part 2) & Review for Final Exam</p> <ul style="list-style-type: none"> • Law of Sines • Law of Cosines • Review for Final Exam 	<p>Read Sections 20.4-20.5 MML Explore 20.4-20.5 MML Hwk 20.4-20.5 Due 11:59pm, 12/9</p>
Week 16 12/10	<p>Cumulative Final Exam</p> <ul style="list-style-type: none"> • Final Exam (Chapters 1-13, 15-20), 1pm-3pm 	

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