Math 129 - Pre-Calculus, Fall 2019
Course Syllabus

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Office hours: Mon: 9:30-10, Tue: 9:30-10 & 1-2, Wed: 9-10 & 2-3, Thurs: 1-3, Fri: 9-10

Class Room/Time: INN-B 201, MTWRF 12:00-12:50 pm
Course website: community.wvu.edu/∼bal0018/math129F19.html (as a backup website, I will also try to keep the eCampus site updated)

Course announcements and possibly homework assignments will be posted on the website. Please be sure to check the website regularly, and to regularly check the email address you have on record. You are responsible for any information posted on the course website.
Textbook: Stewart/Redlin/Watson, *Algebra and Trigonometry*, 4th edition (make sure your copy comes with a 4th edition WebAssign access code)

Catalog Data: MATH 129 Pre-Calculus Mathematics (4-1) Credits 4. A treatment of algebra, analytic geometry and trigonometry.
Prerequisite: ACT math score of 25 or higher.

Course material: This course covers the algebra skills and trigonometry content necessary to begin a study of calculus. The first 8 or 9 weeks of the course will focus on solving equations and inequalities and on understanding different types of functions, both algebraically and graphically. The last 6 or 7 weeks will introduce trigonometric functions and their applications. A rough outline of the topics covered can be found on the next page.

Objective: Upon completion of this course the student should have good algebraic manipulation skills, and a basic knowledge of trigonometry, polar coordinates, and complex numbers.
Outcomes: Upon completion of the course, the student will be able to do the following:

1. Use the laws of exponents, and manipulate and simplify algebraic expressions containing fractional exponents, negative exponents, radicals, and fractions.
2. Solve algebraic and trigonometric equations, inequalities, and systems of equations.
3. Sketch graphs of algebraic and trigonometric functions.
4. Find the composition of functions, the inverse of a function, and the domain and range of a function.
5. Evaluate and graph trigonometric functions, particularly sinusoidal curves.
6. Use basic trigonometric identities and inverse trigonometric functions to simplify expressions and solve equations.
7. Solve right and oblique triangles.
8. Use the trigonometric form of a complex number to compute products, quotients, powers, and roots of complex numbers.
9. Convert from polar coordinates to rectangular coordinates and vice versa.

Topics:

1. Equations and Inequalities (10 days - Sections P.8, 1.4-1.8, 10.1-10.2)
2. Functions and Graphs (10 days - Sections 1.1-1.3, 2.1-2.4, 2.6-2.7)
3. Polynomial and Rational Functions (9 days - Sections 3.1-3.3, 3.6-3.7)
4. Exponential and Logarithmic Functions (9 days - Sections 2.8, 4.1-4.5)
5. Trigonometric Functions (12 days - Sections 5.1-5.6, 6.1-6.5)
6. Trigonometric Applications (11 days - Sections 7.1-7.4, 8.1, 8.3, 9.1-9.2)

Grading: This course combines the course material from MATH 126 and MATH 128. Therefore, I am essentially treating MATH 129 as two courses that you get one combined grade for. You must demonstrate knowledge of both algebra and trigonometry to pass the course. To that end, there will be an algebra final exam held during week 9, and a trigonometry final exam held during finals week. Failure to record at least a 60% grade on either of these final exams will disqualify you from receiving a C or higher in the course, which is the necessary grade to take the calculus sequence.
Besides those two final exams, your final grade will also be based on homework, quizzes, and two other ordinary exams during the semester. Your final course score will be computed as follows:

10% Homework + 5% Quizzes + 5% Attendance + 15% Exam 1 + 25% Algebra Final Exam + 15% Exam 3 + 25% Trig Final Exam

If you maintain an 80% homework average or better in the course, you will be rewarded with the option of dropping one of the ordinary exams if it helps your grade. In that case, you will unlock the following alternate grading scheme:

10% Homework + 5% Quizzes + 5% Attendance + 20% (higher grade of the two ordinary exams) + 30% Algebra Final Exam + 30% Trig Final Exam

For everyone who records at least a 60% or better on each final exam, letter grades will be assigned using the full grading scheme(s) and the following cutoffs:
Letter Grade Cutoffs: A: 90%, B: 80%, C: 70%, D: 60%, F: below 60%

Homework: Homework will be assigned in two forms: WebAssign and paper. You may complete both the WebAssign and paper assignments if you wish, but you are NOT required to do both. You will receive grades in both of these forms separately, and your homework score will be the maximum of the two scores.
Paper assignments will be posted on the course website.
For WebAssign, you can purchase an access code to WebAssign which comes with its own electronic copy of the textbook, OR purchase a new paper copy of the textbook which comes with an access code to WebAssign. You can access WebAssign for free for the first 2 weeks of class, but make sure you enter an access code before that time is done. Homework problems will be assigned in WebAssign for each section. I suggest that you work each problem in a homework notebook first and then submit your answer into WebAssign to find if your answer is correct. Each problem will allow 20 submissions. Resubmit each problem until it is correct to maximize your homework score.

Attendance: I will begin taking regular attendance on Monday, September 9. From that point on, there will be approximately 55 lectures. If you miss no more than 6 of those lectures, you will maintain your full 5% for attendance. If you miss 7 or more lectures, you will lose one percentage point for each two lectures missed. (Note: Excused absences such as participation in athletics or clubs will not count toward your total of absences.)

Exams: The first algebra exam, which I call Exam 1, is tentatively scheduled for Friday, September 20. The algebra final exam will be a two-day exam, tentatively scheduled for Thursday, October 24 and Friday, October 25. The first trigonometry exam, which I will call Exam 3, is tentatively scheduled for Friday, November 15. These will be 50 minute exams taken during the regular lecture time. The trig final exam will take place during the course final exam time, which has been set by the university, and will be Wednesday, December 18 from 10:00-11:50 am. Make-up exams will only be given to students with excused absences, and such make-up exams must be scheduled within 24 hours of the missed exam.

Quizzes: There will be a quiz given most weeks in which there is no exam. This will be a very brief quiz given at the beginning of class, intended to test you with more immediacy than the exams and with less consequence. The problems that appear on the quiz will be taken from the homework problems I assign. Only your best 5 quizzes will count toward your grade, and there will be absolutely NO make-up quizzes.

Getting Help: Please feel free to come to office hours or email me if you have questions about the course material. If you are unable to make it to my regularly scheduled office hours, I am willing to make an appointment to meet at another time if possible. Additionally, you can get help in the Math Tutoring Lab in LRC 323 from 8 AM to 4:30 PM. Free tutoring is also available through Student Support Services, located in Benedum 130, and the Student Success Center, located in the library on the second floor of LRC. Finally, I would also encourage the formation of study groups, to learn from each other and help each other learn.

Class policies:

- Graphing or programmable calculators will never be allowed during any exams. Scientific calculators will be considered on an exam by exam basis. You may use any calculator to help you do the homework if you wish, but you should keep in mind that you may be required to solve similar problems without a calculator on the quizzes and exams.
- If you believe a problem on a homework assignment or midterm exam has been graded incorrectly, you must notify the instructor of your complaint within 7 days of the date the exam is handed back. If you are unable to retrieve your graded material at the time it is handed back, it is your responsibility to make arrangements with the instructor to retrieve the material at another time.

Institutional Policies: Students are responsible for reviewing policies on inclusivity, academic integrity, incompletes, sale of course materials, sexual misconduct, adverse weather, as well as student evaluation of instruction, and days of special concern/religious holiday statements. For these detailed policies of West Virginia University, please review:
https://tlcommons.wvu.edu/syllabus-policies-and-statements.