

Precalculus

MAT 186

INSTRUCTOR: Brian F. Kennedy

Office: C-156

Phone: 860-215-9441

E-mail: mathbk@yahoo.com

REQUIRED TEXT

Precalculus, by Ron Larson 9th edition, a graphing calculator is also required.

CREDIT: 4 credit hours

PREREQUISITE: MAT 172 or equivalent.

COURSE DESCRIPTION

This course is a detailed study of functions and relations, including circular functions, operations on functions and their graphs. Students will study polynomial, power, rational, exponential, logarithmic, and trigonometric functions, trigonometric identities and applications, introductory sequences and series.

GRADING POLICY

A student will receive one of the following grades: A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, I, W, P or Audit. Determination of that grade will be based on the following. Throughout the semester there will be five, 100 point exams (an exam will be announced at least one week prior to its administration). Quizzes and/or take-home projects throughout the semester totaling 100 points. Your final grade will be computed by totaling all the points earned on the five tests, quizzes and projects then dividing that total by the 600 possible points.

Grade Equivalents:	A 93 - 100	B 83 - 86	C 73 - 76	D 63 - 66
	A- 90 - 92	B- 80 - 82	C- 70 - 72	D- 60 - 62
	B+ 87 - 89	C+ 77 - 79	D+ 67 - 69	F 59 or less

Quizzes will be take home or the first 15 minutes of class and cannot be made up. No test can be made up without prior arrangement with the instructor. All makeup tests will take place during final exam week.

COLLEGE WITHDRAWAL POLICY

Course withdrawals are accepted up until the week before classes end. Specific dates are posted in the academic calendar and withdrawal forms are available online or at the Registrar's office. The withdrawal does not have to be signed by the instructor but it is strongly recommended that you speak with your instructor before withdrawing. If you are receiving financial aid you must contact their office for approval before withdrawing. If necessary, you can withdraw over the phone by calling the Registrar's Office.

DISABILITIES STATEMENT

If you have a hidden or visible disability which may require classroom or test-taking modifications, please see me as soon as possible. If you have not already done so, please be sure to register with Chris Scarborough.

ACADEMIC INTEGRITY POLICY

All students are expected to demonstrate their knowledge of the material on each quiz and test. Any student caught cheating will receive a zero on that test.

CLASS CANCELATION POLICY

If class is canceled by the instructor a notice will be placed on the classroom door. If time permits, the class will be notified by email.

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Date	Chapters (Sections) covered	Course Outcomes
1/25	1.4, 1.5	1. Evaluate a function at any given value of x .
1/27	1.6, 1.7	2. Find the domain and range of a function.
2/1	1.8, 1.9	3. Graph the function, using tables and transformations.
2/3	2.2, 2.6	4. Graph piece-wise functions.
2/8	Review	5. Determine whether a function is even odd, or neither.
2/10	Test #1 Chapters 1,2	6. Identify local maxima, minima on the graph of functions and intervals of increase/decrease.
2/17	3.1, 3.2	7. Model with functions.
2/22	3.2, 3.4	8. Combine functions and find their compositions and inverses.
2/24	3.4, 3.5	9. Graph polynomials, find their zeroes, x-intercepts, analyze their end behavior. Use the factor theorem.
2/29	Review	10. Graph rational functions and find the asymptotes.
3/2	Test #2 Chapter 3	11. Perform operations with complex numbers.
3/7	4.1, 4.2	12. Find trigonometric form of a complex number.
3/9	4.2, 4.3	13. Evaluate, graph exponential and logarithmic functions.
3/14	4.3, 4.4	14. Solve exponential and logarithmic equations, model with exponential and logarithmic equations.
3/16	4.4, 4.5	15. Find angle measure in radian and degrees.
3/28	4.5, 4.6	16. Find all trigonometric ratios in a right triangle.
3/30	4.7, 4.8	17. Find the values of trigonometric functions from the information given.
4/4	Review	18. Solve a right triangle.
4/6	Test #3 Chapter 4	19. Solve a triangle using the Law of Sines, the Law of Cosines.
4/11	5.1, 5.2	20. Find trigonometric functions of real numbers using unit circle approach.
4/13	5.2, 5.3	21. Graph the trigonometric functions.
4/18	5.3, 5.4	22. Use the trigonometric identities, addition, subtraction, double and half-angle formula.
4/20	5.4, 6.1	23. Evaluate inverse trigonometric functions.
4/25	6.1, 6.2	24. Solve trigonometric equations.
4/27	6.2, 6.5	25. Plot the complex numbers on the complex plane.
5/2	Review	26. Use sequence notation to write the terms of sequences.
5/4	Test #4 Chapters 5, 6	27. Use factorial notation.
5/9	9.1, 9.2	28. Use summation notation to write sums.
5/11	9.2, 9.3	29. Model the real-life problems with arithmetic and geometric sequences.
5/16	Review	
5/18	Test #5 Chapter 9	

All students are required to maintain an online learning portfolio in Digication that uses the college template.