Syllabus

Three Rivers Community College
MAT 186-PreCalculus room E 225
SPR 2016 Tues/Thurs 10-11:40 AM (CRN) 10393

Instructor:
June Decker jdecker@trcc.commnet.edu
Office: C124 Phone: 860-215-9420
Office Hours: Wed 4:00-4:50, Tues noon-12:45, Thurs 9-10 in office Room C124 or by appt

MAT* K186 4 CREDIT HOURS *Prerequisite: College Algebra or appropriate placement test score.* The 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.

Text: PreCalculus, 9th ed, by Ron Larson.The text is available in hard copy or electronically. An e-copy of the text is available on the Webassign software that we will be using for doing math problems.

Online Homework: www.webassign.com login for a free 13 day trial using the COURSE KEY **trcc.mohegan 7243-3672**

You will be able to create your own login and password. The institution code is trcc.mohegan.

Webassign includes an interactive copy of the text, lecture videos, great review and practice problems and homework hints. Since you have WebAssign, you do not need a hard copy of the text. WebAssign is good until the text goes to a new edition.

- Webassign is free for 14 days so use it early, later you can enter your access code that you may have purchased or use a credit card to buy WebAssign for about $80 on the webassign website.
- There are also Webassign texts (softcover) that come with the code for about $110. They are identical to the hardcover one sold at our store, except they may not have the problems at the end of the sections.
- I googled "webassign student access code for purchase" and found prices as low as $65. You will need the correct prefix of the code you purchase for this particular text. I can not guarantee that any code will work, so be sure you can return it if it does not.
- One option is to use the free trial for 13 days, then use a credit card to pay $75 when prompted at the login to extend your use of Webassign beyond the free trial.

Note: you do not need to purchase a hard copy of the text if you have webassign.

Calculator: You will need some calculating and graphing device. You may use calculator apps for your ipods or laptops. The most often used calculator is the TI 89 or 84. You may use the free apps for androids for TI calculator (I used WabbitMu) . For I-phones, try out DESMOS. Instead of a calculator you may use any of the free math programs downloadable from the web. Two free computer algebra systems are Wolfram Alpha and Microsoft Mathematics available at www.microsoft.com/mathematics . Though you don't need a computer algebra system for this course, you will want to become familiar with one.

Tutoring at TASC: You may sign up for a regular free tutor session in the tutor center in Room C117 by the library. Appointments fill up quickly, so call the tutor desk is 860-215-9082, as soon as you think you might want to engage a tutor on a regular basis. Walk in tutoring is on a space available basis.

Grading Policy:
There will be 3 tests, 4 quizzes or investigations or problem sets, 2 randomly chosen weekly problems from homework, and a cumulative final exam. The final exam counts double a test. Students who receive lower than 40% on the final exam will fail the course regardless of their other grades.

You will be given the opportunity to retake one of the 3 tests during the last week of the course. IF you miss a test during the regularly schedule time, you will receive a zero for that test. At the end of the semester, anyone can make up one test or re-take any test.

Grade distribution:
Each of the 3 tests count a total of $1/7^{th}$ of your final grade. (about 14% each test),
4 quizzes or investigations count for a total of 1/7 of your final grade which is 3.5% each
Two homework problems randomly chosen each Tuesday count $1/7^{th}$ of the final grade about 14% total that is 1% each week.
Final exam counts $2/7^{th}$ (about 28%) of the final semester average.

Digication and General Education:
Each student has a subscription to DIGICATION, an electronic portfolio, that is active forever. As part of your general education requirements, you will upload your work from one of the class assignments onto DIGICATION for me to grade. More information and guidance will occur when the time comes.

College Withdrawal Policy and the N (no show) grade:

You may withdraw from this class any time up to and including May 12, and you will receive a W grade on your transcript. However, you must complete a withdrawal form in the Registrar's Office at the time of withdrawal; if you merely stop attending classes before April 10, you will receive a grade of F. If you do not take the final exam, you will receive a grade of F, regardless of the other work you do. No one's signature other than your own is required on

the Withdrawal form. However, I strongly suggest you discuss your thoughts of a withdrawal with me before you submit the forms so that we can discuss your status and your options. Financial aid students should also discuss withdrawal from a course with a financial aid counselor so that you know the monetary ramifications.

Disabilities Statement:

If you have a hidden or visible disability that may require classroom or test-taking modifications, please see me as soon as possible so arrangements can be made. If you have not already done so, please contact the Learning Specialist, Chris Scarborough, at 860-892-5751 to obtain the proper accommodation credentials.

Academic Integrity:

Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person's ability to succeed in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. Collaboration is encouraged on many assignments such as seminar assignments and homework. Tutors are available to assist you with this sort of work.

In-class tests and the final exam are considered individual work and must be completed without unauthorized assistance of any kind, including help of other students, tutors, unauthorized technology or notes. All test material is to be turned in with the test paper. Attempting to bring work out of the testing area and/or share that work with other students is consider cheating. Cheating on tests, misrepresentation of attendance, falsifying records, or lying will result in loss of credit for all work involved.

I encourage you to collaborate on homework, take-home problems, projects, etc. However, you must understand what you hand in to me. I may verify that you have learned the material covered by the work you have handed in by asking you to explain your work. I may give you a 0 on any work you hand in or any answers you put in Webassign that you do not understand or can not explain.

A full copy of the college's academic integrity policy is in the school's catalog and in the student handbook.

Emergency Closings or class cancellations

If the college administrators decide to issue an emergency school closing, you can receive immediate notifications if you go to My.Commnet.edu and register for the mycommnet.ALERT. You will then receive phone or text messages as soon as a closing is announced. The Alert is more reliable than my email, since sometimes I lose internet service during a storm. If I am going to cancel class or office hours, I will email everyone, so please be sure your email on Webassign is correct.

COURSE OUTCOMES:

After the successful completion of the course the student must be able to:

1. Evaluate a function at any given value of x.
2. Find the domain and range of the function.
3. Graph the functions, using the tables, transformations.
4. Analyze graphs of functions: find zeros of function, the x- and the y intercepts, local max, min for some functions, intervals of increase/decrease, average rate of change, even, odd, or neither .
5. Graph the piece-wise defined functions.
6. Model with functions.
7. Combine the functions, find their compositions, inverses.
8. Graph polynomials, find their zeroes, the x - intercepts, analyze their end behavior. Factor Theorem.
9. Graph rational functions, find the asymptotes.
10. Evaluate, graph exponential and logarithmic functions.
11. Solve exponential and logarithmic equations, model with exponential and logarithmic equations.
12. Find the angle measure in radian, degree, find coterminal , complementary, and supplementary angles .
13. Identify the unit circle; evaluate the trigonometric functions using the unit circle.
14. Find the domain and period of trigonometric functions. Graph them.
15. Find all trigonometric ratios in a right triangle; evaluate trigonometric functions of acute angles.
16. Use the fundamental trigonometric identities, sum and difference of angles formulas, double and half angle formulas.
17. Find reference angles and the trigonometric functions of any angles.
18. Find the values of trigonometric functions of real numbers.
19. Evaluate and graph inverse trigonometric functions; evaluate compositions of trigonometric functions.
20. Solve trigonometric equations.
21. Solve a right triangle.
22. Solve a triangle using the Law of Sines, the Law of Cosines.
23. Find trigonometric form of a complex number.
26. Use sequence notation to write the terms of sequences
27. Use factorial notation.
28. Use summation notation to write sums.
29. Recognize, write, and find nth term of arithmetic and geometric sequence
30. Find partial sums of arithmetic sequence.
31. Find the sum of infinite geometric sequence.
32. Model the real-life problems with arithmetic, geometric sequences.

Schedule of classes PreCalculus Spr 2016 Mat 186 Professor Decker

Please prepare for class by reading the sections or viewing video lectures on WebAssign BEFORE we discuss it in class. Class will be conducted with the assumption that you have viewed the material BEFORE the class begins. Then you will do the homework problems on that section after the class. Keep your homework in a looseleaf notebook so you can hand me two problems of my choosing each Tuesday for me to grade. The work due on sections 1.3-1.10 must done on Webassign so you can get familiar with the program. You grade for work on Webassign will be the percent correct on Webassign, plus a bonus 20%.(so if you do 70% of the homework for chapter 1 sections 1.3-1.5, you earn 70+20=90% for that week's homework.) After week 2 I will either take the grade from Webassign or collect two of you problems for me to grade. It is your choice.

Week 1 Jan 22

Section 1.3 #2-6, 13,17,19,20,23,41,49,51,53,61,63,95,97,98,99,110

1.4 #1-9, 11, 13, 15, 123,31,32,39,42,43,45,49,53,55,57,61,65,67,68,71,76,77,79,81

1.5# 1-9,12,18,19,28,29,33,35,37,46,50,61,63,64,65,66,67,70, 71,73,74,75,76,95,96

WEEK 2 Jan 27

1.6 # 1-10,13,27,35,38,39,43,46,47,48,51

1.7-1.10