## <u>Syllabus</u> Three Rivers Community College MAT 186-PreCalculus Spring 2013 Tues Thurs 10-11:40 Room E227 Course Registration Number (CRN) –

Instructor:

| June Decker   | jdecker@trcc.commnet.edu  |
|---------------|---|
| Office: C124  | Phone: 860-892-5747   |
| Office Hours: | Tues/Thurs1:45-2:25 and Wed 11-11:55 AM in room D219 AM or by appointment |
|               |   |

**MAT\* K186 4 CREDIT HOURS** *Prerequisite: MAT\* K137 or appropriate placement test score.* 

**Text:** PreCalculus, 6<sup>th</sup> ed, by James Stewart, L Redlin and S Watson. 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:** <u>www.webassign.com</u> Your login is your banner or student id number (do not put the @ sign and DROP THE LEADING ZEROS) and your password is ilovemath . Institution is trcc.mohegan

Webassign includes an interactive copy of the text, lecture videos, great review and practice lessons. IF you purchase WebAssign, you need not purchase 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 to decide if it is worth the purchase price of approximately \$90.

**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. 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 <a href="https://www.microsoft.com/mathematics">www.microsoft.com/mathematics</a>. 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 860-892-5713, 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 3.5 tests and a 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 four tests during the last week of the course. IF you miss a test, then you will receive a zero for that test. At the end of the semester, you may elect to make up that test.

Problems done in class and finished at home on Webassign count the equivalent of 1 test. The webassign problems must be completed by the due date. Your Webassign grade will be the percentage of problems you do out of the total. These running totals are tallied on webassign.

Quizzes based on the text reading or lecture videos OR on an important math skill will be given in the first 5 - 10 minutes of class. There will be no makeup quizzes. Most quizzes will be open notebook. The quiz average will count for half a test. Quizzes will be graded 0-4. 0 is a class absence. 1 is attended class, but did not do the assigned reading or video watching. 2 is for demonstrating some familiarity with the topic. 3 is for having a rough idea about the topic. 4 is correct for the most part, but may contain minor errors.

Grade distribution:

4 tests count a total of 8/15 (53%) or (2/15 each – 13% each) Daily quizzes on reading/video lectures 1/15 (7%) Problems on Webassign count as 2/15 (13%) Final exam count 4/15 (27%)

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

You may withdraw from this class any time up to and including May 13, 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 "N" which means "no show". Financial aid students MAY have to reimburse the college for courses in which they have an N. Your best bet is to wait till after April 15 which is more than 2/3 the way thru the course and withdraw. 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. I strongly suggest you discuss your 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.

#### **Course Outcomes:**

## 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.

Exams are considered individual work and must be completed without unauthorized assistance of any kind, including help of other students, tutors, 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.

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 and emergency school closing, you can receive immediate notifications if you go to my.commnet. and register for the mycommnet.ALERT that will phone or text you 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 the college my.commnet system is correct.

Schedule of classes Calculus 1 Spring Mat 254, Professor Decker Course number 31804, Mon and Wed 1-2:40 Rm D221

Take notes on the lecture videos and/or read the text for the given sections before the due date. Your notes on each section will be quizzed in class on the date shown.

Week 1 Intro and some review Jan 24

Week 2

1/29 Section 2.1 Section 2.21/31 Section 2.3 Section 2.4

Week 3

| 2/5 | Section 2.5 Continuity                            |
|-----|---|
|     | Section 2.6 Limits at Infinity: Horizontal Limits |
| 2/7 | Half Test on Sections 2.1-2.6 Limits              |

Section 2.7 Derivatives and Rates of Change

## Week 4

- 2/12 Section 2.8 The Derivative as a Function
- 2/14 Section 3.1 Derivatives of Polynomial and Exponential Functions Section 3.2 The Product and Quotient Rules

# Week 5

- 2/19 Section 3.3 Derivatives of Trig function Section 3.4 The Chain Rule
- 2/21 Section 3.4 More Chain rule practice, Section 3.5 Implicit Differentiation

Week 6

- 2/26 Section 3.6 Logarithmic Differentiation
  - Section 3.7 rates of change in the natural and social sciences
- 2/28 Section 3.8 Exponential Growth and Decay

# Week 7

- 3/5 Section 3.9 Related Rates
- 3/7 Section 3.10 Linear Approx and Differentials Section 3.11 Hyperbolic Functions: quick exposure to hyperbolic compared to circular trig functions. Use formula to find the derivatives of hyperbolic functions.

Week 8

3/12 Review Sections 2.7-3.11

3/14 Test on sections 2.7- 3.11 Derivatives

# SPRING BREAK 3/17-3/24

Week 9

- 3/26 Section 4.1 Maximum and Minimum Values Section 4.2 Mean Value Theorem
- 3/28 Section 4.3 How derivatives affect the shape of a graph

Week 10

- 4/2 Section 4.4 Indeterminate Forms and L'Hospital's Rule Section 4.5 Summary of Curve Sketching
- 4/4 Section 4.6 Graphing with a Calculator Section 4.7 Optimization Problems

Week 11

- 4/9 Section 4.8 Newton's Method for finding roots Section 4.9 Antiderivatives
- 4/11 REVIEW CH 4.

# Week 12

- 4/16 TEST 4.1-4.9 Applications of the derivative
- 4/18 Section5.1 Areas and Distance Section5.2 Definite Integral

## Week 13

- 4/23 Section 5.3 Fundamental Theorem of Calculus Section 5.4 Indefinite Integrals and the Net Change Theorem
- 4/25 Section 5.5 The Substitution Rule

# Week 14

- 4/30 6.1 and 6.2 overview: areas between curves and volumes of revolutions
- 5/2 Review Chapt 5 and 6.1-6.2 Integrals

Week 15

5/7 Test Chapter 5 and 6.1-6.2 5/9 Final Exam Review Problem set due

Final exam week:

5/14 Make up test date for students who wish to replace their grade on one of the three tests. If student does not wish to do a make-up test, he need not come to class.

5/16 FINALEXAM