Syllabus
Math 186 – PRECALCULUS
Spring 2015

Course Number 10393 Section T1
TR 10:00 am – 11:40 am, Room E225

Instructor: Henry Kopij
Email: hkopij@trcc.commnet.edu
Office Hours: TR 1:00 – 2:00 pm D205
            or by appointment

TEXTBOOK: PRECALCULUS-9e by Ron Larson.

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.

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 tables and transformations.
4. Analyze graphs of functions: find the zeroes of functions, the x and 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 functions, find their compositions, inverses.
8. Graph polynomials, find their zeroes, the x intercepts, analyze their end behavior. Factor Theorem.
9. Graph rational functions and 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 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.
24. Use sequence notation to write the terms of sequences.
25. Use factorial notation.
26. Use summation notation to write sums.
27. Recognize, write, and find nth term of arithmetic and geometric sequences.
28. Find partial sums of arithmetic sequence.
29. Find the sum of infinite geometric sequence.
30. Model the real-life problems with arithmetic, geometric sequences.

ATTENDANCE : Attendance will be taken during every class. You are expected to attend each class and to be in class on time. You are also responsible for any material covered in class, including homework assignments and scheduling of exams. Weekly quizzes will be given at the beginning of class and cannot be made up.

GRADING: Four announced 100 point tests will be given along with a final test worth 200 points. Take-home assignment(s) and weekly quizzes will be given during the semester. The final grade will be determined by dividing total number of points accumulated by total points possible.

	B+ = 87-89	C+ = 77 - 79	D+ = 67 -69
A = 93-100	B = 83-86	C = 73 - 76	D = 60-66
A- = 90-92	B = 80-82	C- = 70 - 72	

MAKE-UP TESTS : Make-up tests will be allowed only if the student contacts the instructor on or before the exam day.   The make-up test must also be taken before tests are returned to the class. You may retake a test at the end of a semester that you did the most poorly on. Make-up tests will be given in place of a retake at the end of the semester and only one make-up test will be allowed. Quizzes will also be given on every non exam week. Quiz make-ups will not be allowed. I will drop your lowest two quizzes.

HOMEWORK : Homework will be assigned during each class and will be gone over on the following class. Homework should be kept in an organized notebook. Additional practice is available online through Webassign. Log on to www.webassign.net and create an account (optional). The class key is trcc.mohegan 8682 4811.

Support Services: Free tutoring is available in room C-117 at the Thames Tutoring Center (860-885-2311). Appointments are required in advance.

Cell Phones and Beepers: Cell phones and beepers should be off during class.

Inclement Weather: You can check for delays or cancellations by going to www.trcc.commnet.edu or by calling 860 886-0177.

CLASS PARTICIPATION: I strongly encourage everyone to participate in class and to ask any questions that you may have.

Plagiarism and Academic Honesty:
 At TRCC, we expect the highest standards of academic honesty. The Board of Trustees' Proscribed Conduct Policy prohibits cheating on examinations, unauthorized collaboration on assignments, unauthorized access to examinations or course materials, plagiarism.

Disabilities   If you have a disability that may affect your progress in this course, please meet with a Disability Service Provider (DSP) as soon as possible. Please note that accommodations cannot be provided until you provide written authorization from a DSP.

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TRCC Disabilities Service Providers Counseling & Advising Office Room A-119	
Matt Liscum (860) 383-5240	- Physical Disabilities - Sensory Disabilities - Medical Disabilities - Mental Health Disabilities
Chris Scarborough (860) 892-5751	- Learning Disabilities - ADD/ADHD - Autism Spectrum

Math-186 PRECALCULUS

Text: <u>PRECALCULUS 9e</u> – Ron Larson

Chapter	**Section**	**Assignment**
1	1.4	44/ 6-60, mult of 3,
	1.5	56/ 9-36 mult of 3, 48, 51, 63, 71, 72
	1.6	65/ 15-39 mult of 3
	1.7	72/ 21-42 mult of 3
	1.8	81/ 6-24 mult of 3, 33-42 mult of 3, 45
	1.9	90/ 10-60 mult of 5
2	2.2	133/ 9-14, 20-60 mult of 10
	2.6	177/ 21-39 mult of 3, 50, 55, 60

Test 1

3	3.1	208/ 9, 12, 13-16, 36, 38, 39, 42, 55, 67
	3.2	218/ 9-69 mult of 3
	3.3	225/ 4-84 mult of 4 (omit) ?
	3.4	235/ 18-60 mult of 3
	3.5	245/ 9, 12, 21, 24, 29

Test 2

4	4.1	269/ 2-60 even
	4.2	277/ 5-35 odd, 41-47 odd
	4.3	286/ 6-54 mult of 3, 63-69 odd
	4.4	296/ 10-100 mult of 5
	4.5	306/ 6-24 mult of 3, 39-57 mult of 3
	4.6	317/ 10-60 mult of 10
	4.7	326/ 5-60 mult of 5
	4.8	336/ 5-40 mult of 5

Test 3

5	5.1	355/ 8-24 even
	5.2	362/ 10-20 even
	5.3	371/ 5-40 mult of 5
	5.4	379/ 5-50 mult of 5

	5.5	389/ 9, 12, 21, 24, 33, 36, 39

Chapter	Section	Assignment
6	6.1	408/ 5-50 mult of 5
	6.2	415/ 5-50 mult of 5
	6.5	447/ 10, 20, 30, 40, 50, 52

Test 4

If time permits:

9	9.1	613/ 10-60 mult of 5
	9.2	622/ 5-60 mult of 5
	9.3	631/ 8-80 mult of 8

Exam

Digication:

All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios