PreCalculus – MA 115 – WINTER 2013

MEETING DAYS: M T W R   **CLASS ID:** MA 115 –2

MEETING TIMES: 2:00 – 2:50   **CALL NUMBER:** 10431

ROOM: WS 1705   **CREDITS**: 4

INSTRUCTOR: Dr. Truong, Bao
  NSF 1135
  906 – 227 – 1610 (Math. Dept. 906 – 227 – 2020)
  e-mail: btruong@nmu.edu is my preferred method of communication and the most
  reliable way to reach me.

OFFICE HOURS: 10:00 – 11:00 and noon – 1:00 M T W R or by appointment.
  Please feel free to call or e-mail me for scheduling an appointment.

PREREQUISITES: MA 104 (B- or better), or MA 105/ MA 111(C- or better), or satisfactory score on the math placement exam..

TEXT: Precalculus, 5rd edition by James Stewart, Lothar Redlin and Saleem Watson.

COURSE DESCRIPTION: This course provides the necessary foundation for students who plan to study calculus. Topics include trigonometric functions and identities, basic laws in trigonometry, polar coordinates, complex numbers, transcendental functions, conics, parametric equations, vectors, three-dimensional analytical geometry and more.

COURSE GOAL: This course satisfies the Foundation of Natural sciences/Mathematics requirement. Students who complete this course should be able to demonstrate a basic understanding of mathematical logic; use mathematics to solve scientific or mathematical problems in college classes; express relationships in the symbolic language of mathematics; and appreciate the role of mathematics in analyzing natural phenomena.

ASSESSMENT: The assessments will consist of 3 tests, 9 quizzes, submitted homework assignments, and a final exam. Major learning outcomes are listed below.

- The student will be able to create and use the unit circle to find exact values of six trigonometric functions at angles described by a multiple of 30, 40 and 60 degrees.

- The student will be able to use the formulas to find exact values of trigonometric functions.

- The student will be able to successfully graph, manipulate and work with functions including trigonometric functions.

- The student will be able to exhibit, in all written and oral mathematical work, a clear understanding of the basics of logical and analytical argumentation fundamental to processes of evidence-based and deduction-based scientific methods.

- The student will be able to utilize and clearly explain the mathematical rule of inference called Mathematical Induction to prove that typical formulas P(n) are true for all n = 1, 2, 3,…

- The student will be able to convert a point and an equation in terms of rectangular coordinates into the corresponding with the polar coordinates and vice versa.

HOMEWORK: In addition to ungraded daily assignments, there will be a sequence of graded submitted assignments each of which will be posted on the EduCat™ at https://educat.nmu.edu/ and collected in class at the deadline. In doing homework, you must copy the problem and show your work for each problem assigned. Assignments should be dated and include your name with section number clearly noted. It is your responsibility to ask questions on those problems that you do not understand.

TESTS AND QUIZES: There will be a quiz or a test every Monday. You will be expected to take all 3 tests. Only in the event of an unavoidable emergency will a make-up test be considered. Make-up tests will be more difficult than the original exam. You may drop the lowest quiz grade. If you are absent for a quiz, the missed quiz becomes your dropped grade.

FINAL EXAM: A comprehensive final exam will be given on Tuesday, April 30, 2013.

GRADES:

Weighted percentage:	Tests	40%	Quizzes	25%
	Homework	10%	Final	25%

Grading Scale (approximate)

A	93% up	A –	90 – 92.9%			
B +	87 – 89.9%	B	83 – 86.9%	B –	80 – 82.9%
C +	77 – 79.9%	C	73 – 76.9%	C –	70 – 72.9%
D +	67 – 69.9%	D	60 – 66.9%			
F	below 60%					

IMPORTANT DATES:

First official day of classes - Monday, January 14, 2013

Mid-semester recess begins at 5 p.m. – Saturday, March 2, 2013

Classes resume - Monday, March 11, 2013

Last day of classes - Saturday, April 27, 2013

Monday, January 28 - Quiz 1

Monday, February 4- Quiz 2

Monday, February 11 – Test 1

Monday, February 18 - Quiz 3

Monday, February 25 - Quiz 4

Monday, March 11 – Quiz 5

Monday, March 18 – Test 2

Monday, March 25 - Quiz 6

Monday, April 1 – Quiz 7

Monday, April 8 – Quiz 8

Monday, April 15 – Test 3

Monday, April 22 – Quiz 9

Final Exam: Tuesday, April 30, 2013 at WS 1705 from 2:00 – 3:50.

EXTRA HELP:

- My office: during regular office hours or by appointments.
- Mathematics Tutor Lab: West Science 3810. Mathematics Tutor Lab is open M – R 9:00 am – 4:00 pm and F 9:00 am – 3:00 pm.
- All Campus Tutoring: Learning Resource Center 111H. All Campus Tutoring is open S – W 2:00 pm – 10:00 pm.

- <u>Disability Service Office</u>: If you have a need for disability-related accommodations or service, please inform the Coordinator of Disability Service in the Disability Service Office by either coming into the office at 2001 C.S. Hedgcock, or calling 227 – 1700, e-mailing disserv@nmu.edu . Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state and university guidelines.

ATTENDANCE: Regular attendance is expected from everyone. At the beginning of each class the attendance sheet will be passed around and it is your responsibility to sign it, otherwise you will be marked absent. For "Each day you miss, it takes one day longer to be good".—Ben Hogan, Golfer

CALCULATOR: TI Interactive graphic software can be loaded to your ThinkPad for free at the Help Desk in LRC. Many of you have probably used graphing calculators in the past and you may already have your own calculator. If you have a graphing calculator, you should bring it to class since it is much more convenient than a laptop.

CODE OF CONDUCT: Since every student is entitled to full participation in class without interruption, all students are expected to be in class and prepared to begin on time. If for some emergency reason you are late, you must quietly enter the classroom and find a seat at the back row. All pagers, wireless phones or other devices that make noise must be turned off when you enter the classroom. Disruption of class, whether by talking, noisy devices, eating in class or other inconsiderate behavior, will not be tolerated**. Students who violate these rules will be asked to leave the classroom and will not be allowed to return until they have spoken privately with the instructor**.

ADDITIONAL EXPECTATIONS: Students will arrive for every class with necessary tools: text, notebook, pencil, and calculator. Cell phones and other electronic devices will be out of sight and on silent; speak to the professor if you anticipate receiving an emergency call during class.

"A student who has merely done mathematical exercises but has never solved a mathematical problem may be likened to a person who has learned the moves of the chess pieces but has never played a game of chess. **The real thing in mathematics is to play the game."**

Stephen J. Turner