PRECALCULUS II
MTH 162-35Z
(Fourteen-Week Course)

INSTRUCTOR INFORMATION

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IMPORTANT:

- ☑ The recommended browser to use with the current version of Canvas is Google Chrome or Mozilla Firefox. Other browsers are inconsistent in their performance with Canvas. When taking tests or quizzes, use a wired connection.
- ☑ Check your VCCS email regularly and respond/keep in touch with your instructor.

COURSE DESCRIPTION

Description: Presents trigonometry, trigonometric applications including Law of Sines and Cosines and an introduction to conics. Credit will not be awarded for both MTH 162: PreCalculus II and MTH 167: PreCalculus with Trigonometry or equivalent.

Credits:	3
Prerequisite:	Placement or completion of MTH 161: PreCalculus I or equivalent with a grade of C or better
Submissions:	1 per lesson
Assessments:	4 + Introductory Quiz
Proctored Assessments:	1
Online Activities:	Required

COURSE MATERIALS

Required Textbook: College Algebra. 3/e Corrected Edition July 2013
Stitz and Zeager http://stitz-zeager.com/
Trigonometry by Pablo Chalmeta

Software: MyOpenMath Online Homework: https://www.myopenmath.com/

Calculator: A scientific calculator is recommended. If you own a calculator do not buy a new one. If you do not own a calculator don't spend a lot of money on one. I recommend the TI-30X IIS calculator.

Note: NRCC assumes no liability for virus, loss of data, or damage to software or computer when a student downloads software for classes.

The Student's Guide to Online Learning is available at https://www.nr.edu/online/pdf/studentguide.pdf.

COURSE INFORMATION

Prepared By: Pablo Chalmeta **Approved By:** Sarah Tolbert-Hurysz

I. INTRODUCTION

This is an online course designed specifically for students whose learning styles are best served by providing instructional opportunities beyond the traditional classroom setting.

II. COURSE OUTCOMES

Upon the successful completion of this course, the student will be able to:

- Identify the conic sections of the form:$Ax\text{^}2 + By\text{^}2 + Dx + Ey + F = 0$.
- Write the equations of circles, parabolas, ellipses, and hyperbolas in standard form centered both at the origin and not at the origin.
- Identify essential characteristics unique to each conic.
- Graph equations in conic sections, centered both at the origin and not at the origin.
- Solve applications involving conic sections.
- Identify angles in standard form in both degree and radian format and convert from one to the other.
- Find the arc length.
- Find the value of trigonometric functions of common angles without a calculator using the unit circle and right triangle trigonometry.
- Use reference angles to evaluate trig functions.
- Find the value of trigonometric functions of angles using a calculator.
- Use fundamental trigonometric identities to simplify trigonometric expressions.
- Graph the six trigonometric functions using the amplitude, period, phase and vertical shifts.
- Use trig functions to model applications in the life and natural sciences.
- Use the fundamental, quotient, Pythagorean, co-function, and even/odd identities to verify trigonometric identities.
- Use the sum and difference, double angle, half-angle formulas to evaluate the exact values of trigonometric expressions.
- Determine exact values of expressions, including composite expressions, involving inverse trigonometric functions.
- Solve trigonometric equations over restricted and non-restricted domains.
- Prove trigonometric identities
- Solve right triangles and applications involving right triangles.
- Use the Law of Sines and Cosines to solve oblique triangles and applications.
- Apply concepts of trigonometry to extended topics such as plotting polar coordinates, converting rectangular and polar coordinates from one to the other, identifying vector magnitude and direction, or performing operations with vectors such as addition, scalar multiplication, component form, and dot product.

III. GENERAL EDUCATION STUDENT LEARNING OUTCOMES INCLUDED IN COURSE

General education at NRCC provides the educational foundation necessary to promote intellectual and personal development. Upon completing the associate degree, graduates will demonstrate competency in student learning outcomes in 1) civic engagement, 2) critical thinking, 3) professional readiness, 4) quantitative literacy, 5) scientific literacy, and 6) written communication.

This course includes the following general education student learning outcomes:

- Explain numerical information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).
- Convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words).
- Accurately solve mathematical problems.

IV. COURSE CONTENT

Math 162 presents trigonometry, trigonometric applications including Law of Sines and Cosines, and an introduction to conics

V. INSTRUCTIONAL PROCEDURES

The instruction for the course is done through online videos available through the MyOpenMath software and the textbook.

I will be holding regular office hours and, online office hours through Zoom. Everyone's schedule is different and regular office hours rarely work for most students. I am happy to meet with you almost any time but you must contact me in advance. You can schedule an appointment through Calendly. The Zoom link will be in Canvas and MyOpenMath.

Students can contact their instructor through a variety of avenues: phone, voice mail, E-mail, mail, face-to-face during office hours, or by appointment.

General announcements for the course will occur on an as-needed basis. Updates to course information will be done through MyOpenMath and Canvas https://vccs.instructure.com/. MAKE SURE TO TURN ON YOUR NOTIFICATIONS FOR BOTH. Course documents are always available through the course webpage at http://www.nr.edu/chalmeta

VI. GRADING/EVALUATION

Introductory Quiz: The introductory quiz tests your knowledge of course policies and procedures. It counts for 2% of your grade and may be taken anywhere without a proctor. If you do not complete the introductory quiz in the first week of class you will be withdrawn for non-participation under the Instructor Initiated Withdrawal policy.

Homework: Giving your best effort on homework is the single best thing you can do to help your mathematics. As such, the homework submitted through the MyOpenMath software will count for a significant portion of the grade (18%). The homework is due the day before the test with the same material. There are additional homework problems in the textbook that are not collected for a grade but you are still responsible for knowing how to complete them. The Tutoring Connection on the main campus also has qualified tutors who can work with you on a regular basis.

Tests:

1. There will be three (3) tests administered through the MyOpenMath homework software.
2. You must take the tests in a proctored environment such as our testing centers.
3. You will have 90 minutes to complete the test.
4. Your proctor will provide a formula sheet. A copy of the sheet is in MyOpenMath.
5. You may use a calculator but you **MAY NOT** use any of the symbolic abilities your calculator may have. This includes but is not limited to graphing and solving of equations of any type.
6. There will be no make-up tests. Any missed test will receive the score of "0". See Final Exam below.
7. Tests may be taken early.
8. *The average on all tests will count as 60% of the course grade*

Final Exam. There will be one comprehensive final given during finals week. The final exam must be taken in a proctored environment such as our testing centers. The score on the final will replace the lowest test score (including any missed test) if that will improve your final average. *The final will count as at least 20% of the course grade.*

Calculator: A scientific calculator is recommended. If you own a calculator do not buy a new one. If you do not own a calculator don't spend a lot of money on one. I recommend the TI-30X IIS calculator.

The final grade for the course will be determined as follows:

Description	Points
Tests (3)	60%
Introductory Quiz	2%
Homework	18%
Final Exam	20%
Total:	**100%**

Grade	Final Average
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

NOTES on grading and tests:

- Keep in mind that you might hit a trouble spot somewhere, so you should MOVE AS FAST AS YOU COMFORTABLY CAN, BUT AS SLOWLY AS YOU NEED, in order to meet the deadlines for the tests. The tests **MUST** be taken on or before the scheduled dates; however, you are encouraged to "work ahead."
- I do not curve grades. I do not "give" grades. You earn what you get, so plan to work accordingly.

VII. EMAIL POLICY

If you send me an e-mail always use your NRCC issued email address. Be sure that your email client includes your name in the header. You should always include a **descriptive** subject line that includes the course number. Please remember to use complete sentences and follow the rules of grammar. The Purdue OWL website (click) has excellent information about creating a professional email. I communicate through email to your NRCC issued address. I WILL NOT be replying to email that does not conform to these requirements. I do reply to email within 24 hours during the week. Weekends may be longer.

VIII. WITHDRAWAL POLICY

Student Initiated Withdrawal Policy

A student may drop or withdraw from a class without academic penalty during the first 60 percent of a session. For purposes of enrollment reporting, the following procedures apply:

- If a student withdraws from a class prior to the termination of the add/drop period for the session, the student will be removed from the class roll and no grade will be awarded.
- After the add/drop period, but prior to completion of 60 percent of a session, a student who withdraws from a class will be assigned a grade of "W." A grade of "W" implies that the student was making satisfactory progress in the class at the time of withdrawal, that the withdrawal was officially made before the deadline published in the college calendar, or that the student was administratively transferred to a different program.
- After that time, if a student withdraws from a class, a grade of "F" or U" will be assigned. Exceptions to this policy may be made under documented mitigating circumstances if the student was passing the course at the last date of attendance.

A retroactive grade of "W" may be awarded only if the student would have been eligible under the previously stated policy to receive a "W" on the last date of class attendance. The last date of attendance for an online course will be the last date that work was submitted.

Late withdrawal appeals will be reviewed and a decision made by the Coordinator of Admissions and Records.

No-Show Policy

A student must either attend face-to-face courses or demonstrate participation in online courses by the last date to drop for a refund. A student who does not meet this deadline will be reported to the Admissions and Records Office and will be withdrawn as a no-show student. No refund will be applicable, and the student will not be allowed to attend/ participate in the class or submit assignments. Failure to attend or participate in a course will adversely impact a student's financial aid award.

Instructor Initiated Withdrawal

A student who adds a class or registers after the first day of class is counted absent from all class meetings missed. Each instructor is responsible for keeping a record of student attendance (face-to-face classes) or performance/participation (online classes) in each class throughout the

semester.

When a student's absences equal twice the number of weekly meetings of a class (equivalent amount of time for summer session), the student may be dropped for unsatisfactory attendance in the class by the instructor.

Since attendance is not a valid measurement for online, a student may be withdrawn due to non-performance. A student should refer to his/her online course plan for the instructor's policy.

When an instructor withdraws a student for unsatisfactory attendance (face-to-face class) or non-performance (online), the last date of attendance/participation will be documented. A grade of "W" will be recorded during the first sixty percent (60%) period of a course. A student withdrawn after the sixty percent (60%) period will receive a grade of "F" or "U" except under documented mitigating circumstances when a letter of appeal has been submitted by the student. A copy of this documentation must be placed in the student's academic file.

The student will be notified of the withdrawal by the Admissions and Records Office. An appeal of reinstatement into the class may be approved only by the instructor and dean.

IX. CHEATING/PLAGIARISM POLICY

Cheating includes the use of books, notes, electronic devices, or any other unauthorized material during tests. In particular, students may not bring mobile phones into the testing center. Cheating also includes plagiarism, which is defined as "To present another's words or ideas as one's own or without attribution" (American Heritage Dictionary, 2019). Remember that plagiarism includes using words or ideas from Internet sites, as well as copying from print sources.

Any student found cheating will receive a grade of "0" on that assignment and may receive an "F" for the course. This "0" cannot be replaced by any other score.

X. DIVERSITY STATEMENT

The NRCC community values the pluralistic nature of our society. We recognize diversity that includes, but is not limited to, race, ethnicity, religion, culture, social class, economic status, age, gender, sexual orientation, personal identity and physical or mental capability. We respect the variety of ideas, experiences and practices that such diversity entails. We commit to ensuring equal opportunity and sustaining a climate of civility for all who work or study at NRCC, or who otherwise participate in the life of the college.

XI. DISABILITY STATEMENT

If you are a student with a disability and in need of accommodations for this course, please contact the Center for Disability Services (CDS) for assistance. CDS is located within the Advising Center in Rooker Hall. For more information about disabilities services, see Center for Disability Services Policies and Procedures.