College Algebra ---MA 111
Math & Applied Science Division
3 credit hours
Theresa Bruna
FALL 2015

The learning outcomes detailed in this syllabus meet, or exceed, the learning outcomes specified by the Kansas Core Outcomes Project for this course, as sanctioned by the Kansas Board of Regents.

Course Description: This course reviews standard topics of algebra. Students will study linear and quadratic equations, functions and functional notation, linear, quadratic, rational, logarithmic and exponential functions, systems of equations and inequalities, and matrix algebra. Other topics may be covered at the instructor's discretion. An advisory placement test may be given on the first day of class. Prerequisite: Two years of high school algebra with a C or better and appropriate ACT/COMPASS scores, or MA 110, Intermediate Algebra, with a grade of C or better.

Instructor Contact Information
Office Hours: 7:55a.m. - 3:45 p.m.
Email: tbruna@usd223.org
Phone: 785-747-7306

Course Procedures
Textbook(s): College Algebra (8th Edition) by Richard N. Aufmann and Richard D. Nation   ISBN 978-1-285-43477-3
Required Materials: Be prepared and organized for class. Supplies that you need to bring everyday include your textbook, loose-leaf paper, pencils/pens, ruler and a calculator. Only calculators without a built-in Computer Algebra System (CAS) may be used in this course. Examples of calculators that may not be used are the TI-89 and TI-92.

Examination Procedures:
- Exams will occur at the end of each chapter of the book. You will have 48 minutes to complete the exam.
- Quizzes will occur more frequently within each chapter.

Assignment Procedures:
- Each student is expected to take responsibility for his/her learning by asking questions, completing work, attempting difficult or new concepts, and keeping a positive attitude.
- Homework lessons are due at the beginning of the following class session unless otherwise noted. (NO late work is accepted unless it is because of an absence).

Grading Procedures:
- Homework: 10 points each
- Quizzes: Points will vary
- Exams: 100 points each
- Final Exam is worth 20% of your overall semester grade.

Attendance Policy: CCCC regards punctual attendance as integral to all courses.
- Excused Absence: One day grace period for each day that you are absent.
- Unexcused Absence: No credit will be given for that day's work or anything due that day. Please be advised that this is true for every type of assignment, including tests and projects.
- School Activity Absence: Work must be turned in BEFORE you leave for the activity.
- Parent Permission Absence: Most generally, these absences will be treated like a school activity absence. I expect you to be communicating with me prior to these types of absences.
- If you must be absent from class, YOU are responsible for getting any notes or lessons missed.

<u>Conduct Procedure:</u>
- Allow me to teach; Allow others to learn. The right to learn is the right of all students. Consequently, inappropriate behaviors that distract classmates will not be tolerated.
- Respect Yourself, Respect Others. Students will be expected to show respect to fellow students, teachers, administrators and facilities; and also to their ideas and property.
- A disciplined person is one who does what needs to be done when it needs to be done.
- ADVOCATE for yourself. Your words, your attire, and your actions describe to others who and what you are all about.
- No food allowed in the classroom without permission from me. Only clear water bottles with water are allowed.
- Cell phones/MP3 players should be turned off and stored in backpacks (not in clothes pockets, etc) prior to coming to class.
- You will be allowed use of the "Hall Pass" for movement within the building only. Any other destination will require signatures in your planner.
- The Hanover High School handbook (found in your planner) outlines further expectations. Pay special attention to attendance, cell phones, and dress code!

<u>Tutor Assistance:</u> Free tutoring services are available on the Concordia and Geary County campuses. Call ext. 231 for Concordia and ext. 730 for Geary County.

The best way to learn is by doing. A concept cannot be fully learned on the day it is introduced. Understanding will take time and constant practice over a long period of time is the key ingredient of success. Since you learn by doing the problems repetitively, you must work ALL the problems everyday. If you do not work the problems, you will not learn. It's that simple. If you receive below a 70% on a test, then you are in danger of falling behind and may be asked to stay with me after school for remedial instruction. If you are experiencing any difficulty within my classroom, I encourage and expect to hear from you first. If necessary, we will get parents, counselor, administration involved. Above all, if you are in doubt about anything....ASK!!!! I am here for you!!

<u>Other:</u> The following outcomes are core outcomes for this class and so represent a minimum set of topics to be covered in this class. A class may cover more material at an instructor's discretion.

I. Analysis and graphing of functions and equations. The student should be able to:
   a. Use functional notation
   b. Recognize and distinguish between functions and relations (equations)
   c. Use concepts of symmetry, intercepts, left-and right-hand behavior, asymptotes, and transformations to sketch the graph of various types of functions (constant, linear, quadratic, absolute value, piecewise-defined, square root, cubic, polynomial, rational, exponential, and logarithmic) or relations (circle) given in description.
   d. Determine the domain and range of a function.
   e. Write the equation that describes a function (for the types given above) or circle given its description.
   f. Use graphs of functions for analysis.
   g. Find arithmetic combinations and composites of functions.
   h. Find the inverse of a function.

II. Solutions of equations and inequalities. The student should be able to:
   a. Solve equations listed in I(C), i.e. literal equation, quadratic equations by factoring and quadratic formula, equations involving rational expressions, equations involving radicals and equations involving absolute value expressions, along with equation involving exponential or logarithmic functions.
   b. Solve inequalities of the following types: linear (in one and two variable), polynomial, rational, absolute value.
   c. Solve systems of inequalities by graphing.
   d. Apply equations form II(A) to real-world situations, including but not limited to depreciation, growth and decay, max/min problems.
   e. Examine and analyze date, make predictions/interpretations, and do basic modeling.
   f. Solve systems of equation by various methods.

Assessment

<u>Course Outcomes:</u> Students who complete this course, College Algebra, at Cloud County Community College, will be assessed on the following course outcomes:
   1. Solve various types of equations as listed in Core Competencies.
   2. Solve various types of inequalities as listed in Core Competencies.
   3. Solve systems of equation and inequalities using various methods.
   4. Work extensively with functions, including, but not limited to, arithmetic options with functions, finding compositions of functions, describing transformations of graphs, and finding inverse functions.
   5. Write the equations of various functions given sufficient information.
   6. Develop and solve various mathematical models.
   7. Perform arithmetic operations on matrices.

Assessment of Course Outcomes: Student learning is assessed every semester based on course outcomes. Each instructor measures student performance on all course outcomes for each course sections every semester. The instructor fills out an electronic form, which populates a database. A formal college review of assessment results is used to improve teaching and learning.

Program Outcomes:
1. Prepare students for future courses and for the mathematical requirements encountered in other disciplines and future careers.
2. Define arithmetic, algebraic, geometric, spatial and statistical concepts.
3. Calculate arithmetic, algebraic, geometric, spatial and statistical quantities using appropriate technology.
4. Estimate arithmetic, algebraic, geometric, spatial and statistical quantities.
5. Simplify and/or solve arithmetic, algebraic, geometric, spatial and statistical expressions, equations and problems using appropriate technology.
6. Represent mathematical information numerically, symbolically, graphically and verbally using appropriate technology.
7. Develop mathematical and statistical models such as formulas, functions, graphs and tables using appropriate technology.
8. Interpret mathematical and statistical models such as formulas, functions, graphs and tables using appropriate technology.

Assessment of Program Outcomes: Student learning is also assessed each semester based on program outcomes. Program outcomes accomplishment is measured through performance on course outcomes. Each program uses a matrix to match outcomes of individual courses to overarching program outcomes. The program outcomes are calculated as an average of all of the relevant course outcomes. This information is processed and reviewed by the college to improve teaching and learning.

General Education Outcomes:
- Goal A: The student should apply mathematics by demonstration of proficiency in one or more of the following ways:
    1. Extracting data from mathematical problems.
    2. Representing data suing one or more of the following methods: graphs, charts, tables, and equations.
    3. Analyzing data using one or more of the following techniques: estimation, modeling, calculations, extrapolation, and interpretation.
    4. Interpreting data.
    5. Drawing correct conclusions from data.
    6. Presenting data and making conclusions.
- Goal B: The student should demonstrate applied mathematics in a career setting in at least one of the following areas:
    1. Financial
    2. Scientific
    3. Agricultural
    4. Other career settings
- Goal C: The student should use appropriate technology to solve mathematical problems. Assessing these goals does not affect your course grade in any way.

Assessment of General Education Outcomes: Artifacts of student work are collected from general education courses and reviewed by a faculty committee to assess general education outcomes. Artifacts may also be reviewed by a professional outside of the college. A formal college review of assessment results is used to improve teaching and learning.

College Policies
For a complete explanation of college policies, refer to the Student Handbook, the college website www.cloud.edu or contact the office of Academic Affairs.

Academic Integrity: Students are expected to adhere to standards of honesty in all areas of academic pursuit. Students who compromise the integrity of the classroom are subject to disciplinary action on the part of the College.
1. Cheating is providing or receiving unauthorized help on an assignment, quiz or examination. Cheating in any form is prohibited.
2. Plagiarism is intentionally or unintentionally using another's words or ideas as one's own without crediting the source. Plagiarism in any form is prohibited.
3. Unauthorized Collaboration is using unapproved resources including other students or instructors. Unauthorized collaboration in any form is prohibited.
4. Falsification is acting to deceive or falsely represent. Forgery, or alteration of any documents pertaining to an academic record or school related work, is prohibited.

DISCIPLINARY ACTION

Students who violate academic integrity standards must accept the consequences and/or penalties for their actions. Infractions of these rules will result in action by the instructor and/or administration of the college.

An instructor may impose any of, but is not limited to , the following penalties.
1. Counsel the student on academic dishonesty and plagiarism.
2. Ask the student to re-do the assignment.
3. Alter the grade or give zero points on the assignment.
4. Ask the student to withdraw from the class.
5. Give an "F" for the class.

Repeated violations will be reported to the Division Dean and/or the Vice President of Academic Affairs. The Vice President or his/her designee may impose any of, but is not limited to, the following penalties.
1. Place the student on academic probation.
2. Suspend or expel the student from the institution.
3. Have an "X" permanently placed on the student's transcript indicating that the student failed the course because of violations of academic integrity.

Academic Freedom of Expression: Professional employees have an obligation to protect student's right to freedom of inquiry even when the student's conclusions differ from the professional employee's conclusions.

Incomplete Policy: If a student has not completed all the requirement of a course by the end of the semester, but has completed at least 75%, they may petition the instructor for an incomplete (I). The instructor will determine the completion date. Under no circumstances will the completion date be later than the end of the following semester.

Withdrawal Policy: A student may officially withdraw from a 16-week long course until the end of the 14th week of the semester. A "W" will appear on the transcript. The students must initiate the withdrawal and complete the necessary paperwork through Advisement. Students should realize that withdrawal from class may adversely impact standards of academic progress and eligibility for financial aid.

Academic Due Process: Cloud County has adopted a stepwise procedure for addressing any complaint or dispute related to academic matters. Students must initiate the grievance procedure within 30 days of the dispute.

Accommodation for Disability: If academic adjustment is needed for any type of disability, students should contact the Director of Advisement and Retention Services ext 345, located in the Advisement Center on the Concordia campus.

Inclement Weather Policy: IN case of extremely severe weather, the college may close or classes may be cancelled. Access to cancellation information varies based on course location. Local radio and TV stations are notified, information is posted on the college website www.cloud.edu, and messages are available through the phone system 785-243-1435 or 800-729-5101. The college emergency texting service will notify subscribers of Concordia and Geary campuses cancellations. You may subscribe by texting the word 'tbird' to the number 91011. Contact the class location directly for outreach information.

Emergency Notification Procedures: When alarms are sounded or crisis conditions arise, students will be instructed to move to a designated safe area or to remain in the classroom until the crisis has passed. If informed to leave the room, take as many of your personal belongings as time permits. Cell phones and other electronic devices are only to be used once you arrive in the safe area outside the building. Students requiring special assistance will be the responsibility of the instructor or staff person.
The Concordia Campus utilizes the PA system, phone, or staff interruption of class for tornado or bomb threats. In case of fire, the alarm will sound. If directed to leave a building on the Concordia campus, evacuate to the soccer field unless an alternate safe location has been designated. If directed to leave a building on the Geary County Campus, evacuate to the open field south of the campus.

THIS SYLLABUS IS SUBJECT TO CHANGE!!