

# Basic Algebra Lecture Course Spring Semester 2017

Course Number: DS049

**Instructor Information:** 

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Office Hours: MWF 8:30-9, 12:45-2, TR 8:30-9:30, 12:30-2

\*Faculty will respond to email/phone messages within 48 hours Monday-Friday. All email correspondence is through NCMC student email.

**Course Description:** Student learning outcomes include: order of operations, solving linear equations and inequalities, introduction to graphing in a rectangular coordinate system, simplifying polynomial expression, factoring, and solving quadratic equations with an emphasis on problem solving. This course is a prerequisite for MT110, Intermediate Algebra. (pass/fail)

**Prerequisites:** Appropriate placement score or completion DS048 Pre-Algebra

**Credit Hours: 3** 

#### **Remedial Courses**

Remedial courses will be included when calculating the Qualitative Measure, Quantitative Measure and the 150% maximum time frame. Remedial courses are included in the GPA calculation for purposes of Financial Aid cumulative GPA only. A grade of passing (P) will receive the equivalent of 2.5 and a grade of failing (X) will receive 0 for the Financial Aid cumulative GPA calculation.

# Suggested Textbook and /or supplement materials:

Electronic Textbook: <u>Introductory Algebra Software</u>; Wright, Hawkes Learning Systems (HLS), 2010.

Basic Algebra Binder-available for purchase in the NCMC Bookstore Additional Assistance available at the Academic Resource Center (ARC)

www.hawkeslearning.com

www.ncmissouri.edu/arc (choose math lab)

TI-30 XIIS calculator (recommended)

# Student Learning Objectives: (Five to eight learning outcomes (what you deem important for students to know, think, do, or value upon completion of this course) are recommended.)

| Student Learning Objective   | Assessment Method                          |
|--|--|
| Upon successful completion of this course  | Describe the assessment tool/s used to     |
| the student will be able to:   | demonstrate each student learning outcome. |
| 1. solve linear equations and inequalities containing multiple terms, fractions and/or decimals; manipulate formulas for an identified variable, and solve real-world application problems by expressing them as linear equations that can be solved | assessed on Chapter 3 Test                 |
| <ol> <li>graph linear equations in two<br/>variables using t-tables, slope-<br/>intercept and double intercept; and<br/>find and interpret slope as a rate of<br/>change</li> </ol>  | assessed on Chapter 4 Test                 |
| add, subtract, multiply, and divide polynomials  | assessed on Chapter 6 Test                 |
| factor polynomials, solve polynomial equations by using the zero product property  | assessed on Chapter 7 Test                 |
| 5. simplify radicals, add & multiply expressions containing radicals, solve equations using the quadratic formula  | assessed on Chapter 9-10 Test              |

# **Course Outline/Major Topics Studied**

- 1. Simplifying and evaluating algebraic expressions
- 2. Solving linear equations using addition (subtraction) property of equality and multiplication (division) property of equality
- 3. Solving linear inequalities and applications
- 4. Working with formulas
- 5. Working Applications: number problems, consecutive integers, percent problems, geometry
- 6. Demonstrate your understanding of Cartesian Coordinate Systems and reading graphs
- 7. Graphing linear equations in two variables: ax + by = c
- 8. Using Slope intercept form

- 9. Solving systems of equations by graphing, substitution, and elimination
- 10. Applying Exponent rules
- 11. Demonstrating Exponent rules and scientific notation
- 12. Using vocabulary associated with polynomials
- 13. Add, subtract, multiply (including special products), and divide polynomials
- 14. Factor using greatest common factor and factor by grouping
- 15. Factoring trinomials in the forms:  $x^2$ + bx + c and  $ax^2$ + bx + c
- 16. Factoring special binomials: difference of squares, sum/difference of cubes, and perfect square trinomials
- 17. Solving quadratic equations by factoring and by quadratic formula
- 18. Demonstrate your understanding of application of quadratic equations
- 19. Reducing, multiplying and dividing rational expressions
- 20. Simplifying radicals
- 21. Adding and subtracting radicals
- 22. Solving equations containing radicals

# **Instructional Methods and Techniques:**

This is a structured, student centered, mediated learning (computer assisted) course. Class time will consist of lecture, group work, and demonstration. Homework will be done via the computer and is covered in the section below. You must take an <u>active</u> role in your own instruction to be successful in this course. You will be responsible for learning the material and for getting help if you are having difficulties. I will be available during my office hours if needed. I will also be available by email. The lab and ARC will be open for additional work times.

## **Course Requirements:** Method of Evaluation

The average is based on homework assignments (20%), mid-chapter on-line quizzes (10%), and the 100-point end of chapter exams (50%), and a 200 point final exam (20%). Be sure to show work on tests since partial credit is awarded for correct procedures demonstrated. You will see a percentage at the top of the page of your Hawkes Learning System progress report. You must have a 75% or higher to pass.

| Group / Subgroup / Assignment              | Weight (%) |
|--|------------|
| - Quizzes (edit)                           | 10.00      |
| - Tests (edit)                             | 50.00      |
| ♣Final Exam (edit)                         | 20.00      |
| ♣HLS Lessons (edit)                        | 20.00      |
| -Reviews (recommended/NOT required) (edit) | 0.00       |
| Total Weight (%):                          | 100.00     |

**HOMEWORK** The homework average is based on certifying on-line using the Hawkes Learning System assigned each lesson. You will be given full credit when you master a lesson and zero if you do not master it. You are allowed multiple attempts. Certifications

completed on or before the due dates are worth 10 points out of 10 possible points. Late assignments will be accepted but points will be deducted.

# Late penalty

10% penalty for up to 3 days late

20% penalty for up to 6 days late

30% penalty for up to 9 days late

40% penalty for more than 9 days late

**QUIZZES** On-line quizzes will be assigned mid-chapter. Select the **Webtest** button on the Hawkes student homepage. Complete the **Assigned Tests**. You will be give three attempts and awarded the highest score.

**TESTS:** Each exam is worth 100 points. Partial credit will be given for proper procedures demonstrated. You may earn back some of the points you lose by <u>properly</u> doing corrections with all work shown. To qualify for corrections you must:

- 1) Turn in written documentation of at least three recent 30 minute supervised visits to a tutoring center before the exam is taken. The three visits must be on different days.
- 2) Have no missing homework for that chapter(s).

A multiple-choice comprehensive final exam worth 200 points will also be given. Your final exam score can also replace your lowest 100-point item.

Exams are timed and must be taken during the scheduled class time unless prior arrangements have been made. (Extenuating circumstances are at the discretion of the instructor. If the instructor decides the circumstances warrant an extension, the student needs to understand that only ONE extension may be granted per semester.)

#### Missed Exams

A missed exam will result in a zero for that exam. There are **NO** make-up exams, and everyone must take the final.

## **Grading Scale:**

This is a pass fail class and mastery is the key element.

## To pass, your final average must be 75% or above

- If you pass the course you will see "P" on your SAIL account
- If you receive below a 75% you will see an "X" on your SAIL, indicating you have not passed the course.

## **Late Work**

No late work will be accepted—Extenuating circumstances are at the discretion of the instructor. If the instructor decides the circumstances warrant an extension, the student needs to understand that only ONE extension may be granted per semester.

## **Attendance and Class Participation:**

Attendance points are factored in to the course average as a 30 point quiz. A student can miss 2 class sessions without penalty. FIVE points will be subtracted from the 30 points for each additional absence. Three tardies will equal one absence.

Absences reduce the value of the learning experience and reduce the probability of passing the course as research indicates successful college students attend class regularly. NCMC strongly encourages students to attend classes on a regular basis as registration for any NCMC course presupposes that the student will attend all scheduled classes, laboratories, and clinicals.

Failure to attend class does not constitute an official standard withdrawal. Students are responsible for withdrawing from classes. If a student knows they are going to be absent for a college-sponsored event, they must inform the instructor prior to that absence so that arrangements can be made for classwork, assignments, and/or tests.

After the published Add/Drop date, students are financially responsible for costs associated

with classes from which they have withdrawn. Students are also financially responsible for the course under the Administrative Drop Policy.

Administrative Drop Policy:

- In an 8-week or full semester on-ground class, if a student fails to attend during the **first ten calendar days** of the semester, an administrative drop will occur. In a 4-week class, if a student fails to attend during the **first six calendar days** of the semester, an administrative drop will occur.
- In an 8-week or full-semester online class, if a student does not complete at least one substantive activity (activity or assignment that impacts the final grade) during the first ten calendar days of the semester, an administrative drop will occur. In a 4-week online class, if a student fails to complete at least one substantive activity (activity or assignment that impacts the final grade) during the first six calendar days of the semester, an administrative drop will occur.
- Under these circumstances, students are financially responsible for 50% of tuition and course fees associated with classes from which they have been administratively dropped.

#### Additional Information:

- TAKE NOTES.
- Math must be studied on a daily basis. For every hour in class, you are expected to spend at least two hours preparing for class.
- Respect for one another and the ability to work with others is necessary for your success in the classroom as well as in your current and future employment.
- If phones are brought to class, they must be silent. **No texting** during class. Phones should be placed face down on your table and left alone until the conclusion of class.
- If the teacher is tardy to class, you are required to wait 15 minutes before leaving.
- Announcements for NCMC closure will be on the NCMC website, http://www.ncmissouri.edu, the radio: 92.3 FM Trenton or 102.5 FM Chillicothe or you can receive a text or e-mail by signing up for Community Connection at

http://www.ncmissouri.edu/serv/default.aspx. If the teacher cancels, there will be notification on the door of the classroom and also on Blackboard.

- In the event class is canceled there will be instructions/homework on Blackboard.
- If you are having difficulty with your math, there is additional help available without cost.
  - 1. Tutoring in the ARC and/or
  - 2. Schedule an appointment with your instructor

#### **Academic Misconduct**

Academic integrity is expected and required of all NCMC students. Students and faculty are responsible and accountable for personally upholding that integrity. Each instructor is assigned jurisdiction for class conduct and grades. Cheating will not be tolerated, and students found guilty of cheating in any way will be disciplined according to the following policy.

# **Cheating Offenses**

Cheating offenses include, but are not limited to, the following:

- Copying from another student in an examination situation.
- Using unauthorized material or aids in the preparation of an assignment, paper or project.
- Possessing unauthorized material or aids in an examination situation.
- Allowing another person to take an examination in one's place.
- Altering or falsifying academic records in any way.
- Submitting false medical, academic or other documentation required by the college.
- Improperly obtaining an examination prior to the examination.
- Aiding or abetting anyone in a cheating offense.
- Plagiarizing materials or works, in whole or in part, prepared by another person without citing appropriate reference credit.
- Copying and submitting, in whole or in part, the work of another in an assignment, report, paper, project, etc. as one's own.
- Claiming to have completed assigned tasks that were, in fact, completed by another person.
- Failing to accurately document information, wording, or visual images obtained on the World Wide Web.
- Violating federal copyright laws including unauthorized duplication of copyrighted materials.

Math Department Cheating Policy: Cheating includes all of the acts listed above as well as, using a phone or computer app to come up with answers. If you are suspected of cheating in a math course, you will receive a 0 score on your exam or assignment and will be referred to the Dean of Instruction. If you are allowed to stay in the course and are caught cheating a second time you will be automatically dismissed from the course with a failing grade.

#### **Procedure**

- 1. When a student is suspected of cheating, the instructor or other individual who suspects the student of cheating will, at the earliest opportunity, investigate the situation, discuss the matter with the student and come to a decision regarding the student's innocence.
- 2. In the event a decision is made that the student is responsible of cheating, before determining an appropriate penalty, the course instructor will ascertain from the Dean of Instruction whether the student has been found responsible of any previous cheating offense while enrolled at North Central Missouri College.
- 3. In the event that the instructor determines this to be a first offense for the student, the instructor will apply an appropriate penalty. The instructor should give due consideration to the seriousness of the offense as well as the impact of the penalty imposed on the student's education. The penalty should also be consistent with the range of penalties outlined in this policy.
- 4. The instructor will inform the Dean of Instruction of the cheating offense and the penalty applied.
- 5. In the case of a second offense by the student, the Dean of Instruction will determine the appropriate penalty for this offense and will ensure that the penalty is more severe than the penalty imposed for the previous offense. The student will be advised that if found responsible of a third offense of academic dishonesty at North Central Missouri College, the penalty of expulsion from the College could result.

#### **Penalties**

A student responsible of cheating will be subject to a penalty appropriate to the nature and seriousness of the offense.

A record of all such cases will be kept in the office of the Dean of Instruction. Second offenses for the same individual will be subject to a more serious penalty than the one previously imposed.

The following penalties may be applied:

- Reprimand.
- Requirement that the student repeats and re-submits the same or alternate assignment.
   In such cases, the grade or mark awarded will be reduced or limited at the discretion of the faculty member.
- A mark of "0" will be given for the assignment with no opportunity to resubmit. This may result in failure of the course.
- A failing (F) grade will be awarded in the course.
- Automatic failing (F) grades in all courses in which the student is registered, and no tuition or fees will be refunded for that semester. This penalty will only be imposed by the Dean of Instruction.
- Expulsion from North Central Missouri College, permanently recorded on the student's record. This penalty will result in automatic failing (F) grades in all courses in which the student is registered, and no fees will be refunded for that semester.

## **Special Accommodations:**

North Central Missouri College complies with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990. Students with documented disabilities who need special classroom accommodations must make their requests in writing to: Disability Support Services, Alexander Student Center, 1301 Main Street, Trenton, MO 64683 or call 660-359-3948, ext. 1405 for an appointment. Services provided can be found at: <a href="http://www.ncmissouri.edu/advising/">http://www.ncmissouri.edu/advising/</a>

If you have been approved for an accommodation, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately.

#### Title IX:

In accordance with Title IX of the Education Amendments of 1972, NCMC prohibits sex discrimination and is committed to fostering a learning environment that is safe, inclusive, and fosters academic success. Sex discrimination involves differential treatment or adverse action based on a person's real or perceived sex, gender identity and/or gender expression. Sex discrimination includes discrimination on the basis of pregnancy, sexual orientation, gender identity, and failure to conform to stereotypical notions of femininity and masculinity, as well as same gender harassment. Sexual harassment is a form of prohibited sex discrimination, and sexual violence is a particularly severe form of sexual harassment.

If you or someone you know experience gender-based discrimination, harassment, or violence, please contact Dr. Kristen Alley, Title IX Coordinator, Alexander Student Center, 1301 Main Street, Trenton, MO 64683 660-359-3948, ext 1400, <a href="mailto:kalley@mail.ncmissouri.edu">kalley@mail.ncmissouri.edu</a>. More information can be found at: <a href="http://www.ncmissouri.edu/titleix/">http://www.ncmissouri.edu/titleix/</a>

## **Early Alert:**

Success in this course is important. When the instructor believes that a referral to the Early Alert Program will help a student academically, information will be sent to appropriate college personnel. As a result, the student may be contacted by other faculty/staff in order to develop an intervention that will help in achieving educational goals. Please take advantage of these and other resources while at NCMC.

## **Communications:**

Students are required to use their NCMC student email account for any correspondence within the college. Students are also highly advised to check their email and SAIL accounts on a regular basis.

#### Finals:

If an emergency occurs that prevents the administration of a final examination, the student's final course grade will be calculated based on the work in the course completed to that point in time and the faculty member's considered judgment. Final exams will not be rescheduled, and

a grade of "I" will not be given as a result of the missed exam. This Finals policy does NOT apply to online courses.

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