COURSE INFORMATION

The course reviews the fundamental concepts of real and imaginary numbers along with symbolism used in Algebra. Concepts to be developed include solving and graphing linear and quadratic equations, exponential and logarithmic functions, systems of equations and matrices. Students will apply these concepts to real world situations through word problems.

Credits: 3

Pre/Corequisites:

- Prerequisite: Grade of C or better in MA-110 Intermediate Algebra or appropriate placement scores.

CLASS INFORMATION

Section Number: MA 111   Term: Summer   Year: 2025   Start Date: 6/2/2025   End Date: 7/25/2025

INSTRUCTOR

Amber Meis
Email: ameis@fhtechnc.edu
Office Phone: 7856236153
Office Location: Classroom A Office
Office Hours: By appointment.   Email is the best way to communicate with me (especially in summer) and get in contact with me for the fastest response. My email is ameis@fhtechnc.edu. I do get back to students within 48 business hours.

TEXTBOOKS

Cengage Unlimited: (**Required**) ISBN: 978-0-357-70003-7 (comes with an electronic book- can rent the text for a minimal fee from the book company).

College Algebra 11ed. (**Optional**) Ron Larson ISBN: 978-0-357-45409-1

SUPPLIES

- Paper and Pencil
- Graphing Calculator
- Computer

COURSE COMPETENCIES

1. Use functional notation, including finding arithmetic combinations and compositions of functions.

2. Recognize and distinguish between functions and relations (equations).

3. 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.

4. Determine the domain and range of relations and function.

5. Write the equation that describes a function (for types given above) or circle given its description.

6. Use graphs of functions for analysis.

7. Find arithmetic combinations and composites of functions.

8. Find the inverse of a function.

9. Solve equations including literal equations, linear equations, quadratic equations by factoring and the quadratic formula, higher-order polynomial equations, equations involving rational expressions, equations involving radicals, and equations involving absolute value expressions, along with equations involving exponential or logarithmic functions.

10. Solve inequalities of the following types: linear (in one and two variables), polynomial, rational, absolute value.

11. Solve systems of inequalities by graphing.

12. Apply equations from outcome #1 to real-world situations, including but not limited to depreciation, growth and decay, and max/min problems.

13. Examine and analyze data, make predictions/interpretations, and do basic modeling.

14. Solve systems of equations by various methods, including matrices.

GRADING INFORMATION

Fort Hays Tech | North Central Grading Scale:

A   100% -90%

B   89% - 80%

C   79% - 70%

D   69% - 60%

F   59% and below

Instructor Grading-

Grading will be awarded on a weighted point basis.

Each category will be part of your grade:

    Chapter Online assignments

    Optional: Application/Real-World Problem Completion

    3 Unit Exams

    1 Cumulative Final

Category	Percentage
Tests (15% each)	**45%**

Final Exam	**30%**	
Weekly Assignments/ Notes	**25%**	
Total	**100%**	

Extra Credit will also be offered at about midway through the semester.

ACADEMIC HONESTY

Membership in the Fort Hays Tech | North Central learning community imposes upon the student a variety of commitments, obligations, and responsibilities. It is the policy of this College to impose sanctions on students who misrepresent their academic work. Appropriate classroom instructors or other designated persons will select these sanctions consistent with the seriousness of the violation and related considerations.

Examples of academic dishonesty include but are not limited to:

- Plagiarism: i.e. taking someone else's intellectual work and presenting it as one's own. Each department set standards of attribution. Faculty will include disciplinary or class-specific definitions in course syllabi.
- Cheating is unacceptable in any form. Examples include consultation of books, library materials, notes or intentional observation of another student's test on paper or a computer screen; accessing another student's answers from an exam to be given or in progress; submission of falsified data; alteration of exams or other academic exercises; and collaboration on projects where collaboration is forbidden.
- Falsification, forgery or alteration of any documents pertaining to assignments and examinations.
- The use of AI generated content from AI tools such as, but not limited to, ChatGPT, Dall-E, Co-Pilot, etc., is up to faculty discretion per course as stipulated within the course syllabus. Submitting AI generated work as your own, without attribution, will be considered academic dishonesty.
- In courses where the use of AI tools are not permitted as stipulated within the course syllabus, work submitted using AI will be considered academic dishonesty.
- Students who participate in, or assist with, cheating or plagiarism will also be in violation of this policy.

Classroom instructors and/or administrators will assess sanctions for violations of this policy. The seriousness of the violation will dictate the severity of the sanction imposed. Academic sanctions may include but are not limited to any of the following:

1. verbal or written warning
2. lowering of grade for an assignment
3. lowering of term grade

Administrative sanctions may include but are not limited to either of the following

1. Suspension from the course, program, or College
2. Dismissal from the course, program, or College

FORT HAYS TECH | NORTH CENTRAL MISSION STATEMENT

Fort Hays Tech | North Central delivers applied, innovative and personalized education to empower learners, enrich lives, develop skilled professionals and strengthen economic systems.

Vision Statement

Fort Hays Tech | North Central is dedicated to being a leader in workforce development by maximizing value for students, employers and communities through educational excellence.

Core Values

Achieving EXCELLENCE with INTEGRITY through

- DEDICATION
- INNOVATION
- COLLABORATION
- COMMUNICATION

FORT HAYS TECH | NORTH CENTRAL NON-DISCRIMINATION POLICY

Fort Hays Tech | North Central is committed to nondiscrimination on the basis of race, color, gender, ethnic or national origin, sex, sexual orientation, gender identity, marital status, religion, age, ancestry, disability, military status, or veteran status in admission or access to, or treatment or employment in, its programs and activities. Further, it is the policy of the college to prohibit harassment (including sexual harassment and sexual violence) of students and employees. Any person having inquiries concerning the college's compliance with the regulations implementing Title VI, Title VII, Title IX, Section 504, and the Americans with Disabilities Act Amendments Act is directed to the VP of Student and Instructional Services (Section 504/ADA Compliance Officer and Title VI, Title VII, & Title IX Compliance Officer) at (785)738-9055, cisbell@fhtechnc.edu or PO Box 507, 3033 US Hwy 24, Beloit, KS 67420.

OVERVIEW FOR STUDENTS WITH DISABILITIES

Fort Hays Tech | North Central is dedicated to providing equal access and opportunity to all campus programs and services for students with disabilities. We are committed to providing reasonable accommodations in accordance with applicable state and federal laws including, but not limited to, Section 504 and 508 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. We strive to create a safe, respectful and inclusive environment and promote awareness, knowledge and self-advocacy.

Fort Hays Tech | North Central acknowledges that traditional methods, programs and services are not always appropriate or sufficient to accommodate the limitations experienced by some qualified persons with disabilities. When a student's disability prevents him/her from fulfilling a course requirement through conventional procedures, consideration will be given to alternatives, **keeping in mind that academic standards must be maintained**.

Services are provided through Student Accessibility Services (SAS) staff located in the Student Success Center, on the Beloit Campus, and in Student Services, on the Hays Campus.

- Director of Learning Services, may be reached at 1-785-738-9020; or by mail at Fort Hays Tech | North Central, 3033 US Hwy 24, Beloit, KS 67420.

Student Responsibilities
Students requesting support services will need to register ("self-disclose" and complete Student Accessibility Services Intake and Consent Form), provide appropriate documentation (if available) including how the disability affects academic performance and suggested accommodations, and communicate with the Director of Learning Services as part of the interactive process to create an *Educational Accommodation Plan* that will notify Instructors of approved accommodations, services and/or auxiliary aids.

Students are encouraged to make timely and appropriate disclosures and requests, at least two weeks in advance of a course, program, or activity for which an accommodation is requested (or as soon as realistically possible) to allow adequate time for accommodation services to be set in place.

Accommodations, Academic Support Services, or Auxiliary Aids
Reasonable accommodations including academic support services and auxiliary aids are provided to allow students with disabilities an equal opportunity to participate in and benefit from our educational programs. Accommodations will be provided on a case-by-case basis determined by student request, documentation, intake interview, Educational Accommodation Plan team, and assessment of individual needs and course requirements.

Reasonable testing accommodations may include, but are not limited to:
- Extended testing time
- Reduced distraction testing environment
- Test reader and/or scribe
- Use of calculator

Academic support services/auxiliary aids may include, but are not limited to:
- Note-taking assistance (second set of notes, power point slides, or other visual aids provided)
- Sign Language Interpreter
- Preferential seating in the classroom
- Large print exams, handouts, signs, etc.
- Telecommunications devices
- Use of Assistive Technology

Accommodations may not fundamentally alter the nature of the program or activity, lower academic standards, present undue financial or administrative burden on the college, or post a threat to others or public safety.

Additionally, some accommodations and services cannot be provided, such as personal devices or assistance with personal services.

Auxiliary aids may be available through a variety of sources available to individual students. The student may make a request in obtaining specialized support services from other resources such as Vocational Rehabilitation Services (VR), Recordings for the Blind, Kansas Talking Book Service, etc. For example, Vocational Rehabilitation may fund such items as transportation to the institution, tuition, textbooks, hearing aids, and other individually prescribed medical devices.

If at any time throughout the academic year, a student feels that the agreed upon accommodations are not being followed or that alternate accommodations need to be provided, the student should notify Student Accessibility Services (SAS) staff. Fort Hays Tech | North Central is committed to student success; however, we do not require students to use accommodations. The decision of when to utilize approved accommodations or services is up to the student. Integration, self-advocacy and individual responsibility are promoted and expected.

Grievance Procedure
Any student who believes he or she has been subjected to discrimination on the basis of disability or has been denied access or accommodations, shall have the right to invoke the Grievance Procedure.

Students are encouraged to first discuss their concerns with SAS. An attempt will be made to resolve the issue(s) causing concern by assisting the student in discussions with the person(s) involved. Most situations are positively resolved through this process. If the student does not feel the concern or complaint has been appropriately resolved, he or she should contact the Vice President of Student and Instructional Services at 1-800-658-4655 or PO Box 507, 3033 US Hwy 24, Beloit, KS 67420, where grievance procedures are filed for all students, including students with disabilities.

If the complaint is not resolved at the College level, a student may choose to file a complaint with the Office for Civil Rights at 1-816-268-0550 or U.S. Department of Education, One Petticoat Lane, 1010 Walnut Street, Suite 320, Kansas City, MO 64106.

Confidentiality
All information regarding a student's disability is confidential. All documentation will remain separate from academic records and will not be released to an individual or source external to Fort Hays Tech | North Central without the student's written consent. In order to provide effective services, it may be necessary to communicate limited information on a need-to-know basis regarding disability-related needs to Fort Hays Tech | North Central faculty and/or staff.

REASONABLE SUSPICION

If reasonable suspicion of substance abuse exists regarding an employee or student based on objective criteria (including, but not limited to, behavior, appearance, demeanor, detection of the odor of alcohol or any controlled substance), the employee or student will be requested to consent to drug testing performed by Fort Hays Tech | North Central's contract vendor at the expense of the college.

    A. A college administrator (or their designee) shall drive the employee or student to the vendor's site for drug testing and shall return the employee or student to his/her residence (or arrange for transportation) following the testing.

B.   Test results shall be sent directly to the college administrator, with a copy also sent to the employee or student. All test results will be considered confidential, access to the results will be limited to institutional personnel who have a legitimate need-to-know.

C.   In the event of a positive test result, the employee or student may request a retest of the sample at the employee or student's expense. The request must be submitted within 24 hours.

D.   Positive results for any illegal drugs, or prescription drugs (either not prescribed for the employee or student, or at levels above the prescribed dosage), or blood alcohol level of 0.04 or greater shall be grounds for disciplinary action, up to and including termination or expulsion.

E.   Refusal to provide a specimen for this testing shall be treated as a positive drug test result.

F.   Test results or specimens that have been determined to be altered by the employee or student shall be grounds for disciplinary action, up to and including termination or expulsion.

G.   If the employee or student tests positive for an authorized prescription drug which may impair his/her performance or judgment, the employee or student may not be permitted to participate in college activities until he/she provides a doctor's release.

RIGHT TO MODIFY THE SYLLABUS

The instructor reserves the right to modify the syllabus during the semester. Students will be given advanced notice if a change would occur.

MUTUAL RESPECT

The mathematics classes are designed for collaboration rather than competition. That means that each member of the class supports the others in their efforts to succeed. Be sure to come to each class prepared to:

1. Listen with respect.
2. Speak with respect.
3. Contribute actively to the work of your team.

GUIDELINES FOR SUCCESS

Attendance Policy:

Attendance in class if very important. Please sign in and complete your assignment every week. Completion of homework is how you will pass this course.

This class has three components to it. First, you are required to complete online assignments through Cengage on WebAssign. There are other helpful things such as useful real-life problems that are given to you that you can complete to extend your knowledge of the subject as well. I also include video lessons and notes to help you with your learning journey too. You will have 3 unit exams and 1 final exam as well.

Assignment Policy:

You are permitted and encouraged to use a calculator for this class. It should be a calculator that gives you the ability to raise a number to a large exponent.

No late assignments are accepted after the due date. Due dates will be as follows: Webassign will be due on Sunday evening at 11:55 p.m. (unless otherwise stated). We will intend to complete (usually) one chapter a week. You will have 3-unit exams and one cumulative final. I also include a section for you with extra problems where you can attempt to complete some additional real-world problems in order to increase your knowledge of algebra concepts if you so desire.

I am available for assistance if needed on those as well. There are videos of me teaching basic concepts of the chapter that you can download and watch as well as notes over the video that will assist you greatly in learning the material.

THIS IS IMPORTANT!!! ALWAYS TAKE A SCREENSHOT of your scores before you submit your assignments (especially your tests!) If you are testing and the internet goes down in the middle of the exam, your test score will be lost! Unless you take a screenshot of that test score and save it to your computer by going to a word document and posting it there by copying it there, then you will not have anything to back up that you took the test. You should keep that screenshot until I post your score and you ensure that I have the correct score for you. If you do not do this, you will have to deal with the consequences of not doing so, whether that means that you have a zero as a grade or you have to retake the exam or redo the assignment. Unfortunately, the internet is not reliable all of the time and I cannot be held responsible for the results of losing your grade. If you choose to take the chance by not taking a screenshot of your scores, then that is your decision.

About the paper problems- these are meant to be more difficult than the WebAssign. These problems are used to help you think more deeply about the subject and the problems and incorporate the learning that you have had that week. These problems come directly out of the book and can be used for greater understanding of the subject. Also, if you are needing a little extra help, I will be available to give that to you by emailing me and asking me for help with what concepts you are not understanding.

It is essential that you take the final exam. If you do not take the final exam, you will not pass this class. The final exam is used to find out that you know the material that was to be learned throughout the semester. If you do not take the final exam, you cannot show that you know the material that was to be learned in the class; therefore, you will not pass if you do not take the exam.

Proctor:

Normally it is necessary to find a proctor for your testing but in the summer, I find that it is more difficult to do that. So, in the summer, you will take the unit exams on your own with you acknowledging that you will complete the exams on your own with no assistance from any other person(s) to do so. Then on your final, you will schedule a time with me to take the exam via teams' video and while I am watching you take the exam. Your unit exams and your final should be consistent and similar grades. This will ensure that you did, in fact, take the unit exams on your own. If they are completely different in scores, we may have an issue that we would have to discuss further.

Videos:

For my face-to-face classes, I use what is known as a "flipped classroom" approach to teaching. This means that I video the basics of the lesson and send it to my students. I have those videos for you to access so they can help you as well. I have also left the notes for you to download and take notes on the video if you so desire. These videos are not for your entertainment value and are only to be used for the purpose of providing information to you about the concepts of the chapter. Then the students will come to class and work on the problems in class while I am present so I can assist them if they need it. Another good reason I video the lesson, some of you may only need to hear it one time, and you can get the process down. There are some of you, though, that require more exposures to the content than that and this provides you the opportunity to watch the videos again at your convenience.

Office Hours:

I will hold office hours for the class on a day that will be announced soon. This is a time when you can come to talk with me on Microsoft Teams and get questions answered and help from me. I am also available for you to tutor you, answer questions, go over material, or anything that you need by emailing me and asking. I do make myself as available as possible for my students and wish for you to succeed so I encourage you to reach out and ask for assistance. If you do not do this and you need help, I will not know that you need help. DISCLAIMER: Because this is an online class, it is mainly a self-study type of class. You will be responsible for most of the learning on your own. Your book is a great resource as it has many problems being shown in their entirety. Being able to learn things on your own makes you a good student and will help you become a lifelong learner. It is NOT a bad thing for you to learn things on your own. I hope that you are aware of that going in to this. I will not be available to do every problem that you may have on your assignment. That is not something that happens in an online class so please be aware of that. I can assist you with various problems or issues that you are having but will likely not do all of your problems for you. I hope that you are aware of that going into this. I am not available to do every type of problem that you may have on your assignment but I do assist you in however I can as you go through the semester.

There are other places, besides your book, that I recommend that you look at if you have issues and need help (in the event that you have tried contacting me but I have not gotten back to you). A great resource is YouTube. There are many videos that are uploaded to help algebra students out. There may also be apps out there that will show you step-by-step how to complete problems. I only suggest you use these in order to find out how to do the problems so that you are able to complete them correctly on the exam. You will NOT be able to use an app on the exam, so do not become reliant on one for your assignments.

Another resource is our Brainfuse Tutoring on your Blackboard Platform. It will be located at the bottom of the general area (top part before the dates start) of your page. This is 24 hours a day/ 7 days a week online tutoring service that Fort Hays Tech | North Central uses. Your scientific calculator may be able to help you as well. With these, you can use the formulas and put the numbers in where appropriate and then have the answer. If you figure this out, it is a life and time saver. You can look up instructions on this by using YouTube and putting in your calculator's name and then searching what you are looking to learn how to do. There should be videos there to instruct you how to do these types of problems.

Class Importance:

1. Use a calculator, if possible.
2. If you have any questions, please ask.
3. It is always okay to make mistakes in class! I will, you will, the other classmates will too. Please welcome this and learn from them.
4. Know that I am here to help you. I want you to be successful. I spend a lot of my free time helping students individually and would not hesitate to help you. I can at least point you in the right direction if you have questions. I will work with you if you work with me, but I cannot be the only one that wants you to succeed and I cannot help you if you do not ask. I would also caution you to have a good attitude about coming to me with questions. Sometimes it becomes difficult to help students if they have a bad attitude or approach an instructor in any kind of negative way.

5. It would be helpful if you show every step of your problems on paper so you have them on your test or when you need assistance. If you do not show your work on the problems on the paper that does not help you much on the test. It is also difficult to help you with questions if you do not show your work. If you need assistance, I am going to ask to show me what work you have completed before trying to help you (so I know what you are doing wrong) to get the correct answer.

6. Show up to class (online), participate, do your homework, and study twice as many hours out of class as you attend class per week. If you put in the effort, you will get the result you want.

"Education is the most powerful weapon which you can use to change the world." - Nelson Mandela

Summer 2025 Online Schedule

Week	Chapter	Assignment(s)	Objectives Covered
1	Chapter 1	Chapter 1 Online Introduce Yourself Optional: Watch Video/ Notes/ Slides/ Application Problems	*Solve equations including literal equations, linear equations, quadratic equations by factoring and the quadratic formula, higher-order polynomial equations, equations involving rational expressions, equations involving radicals, and equations involving absolute value expressions, along with equations involving exponential or logarithmic functions. *Solve inequalities of the following types: linear (in one and two variables), polynomial, rational, absolute value. *Solve systems of inequalities by graphing. *Apply equations from #1 in this core outcome to real-world situations, such as depreciation, growth and decay, and max/min problems. *Examine and analyze data, make predictions/ interpretations, and do basic modeling.
2	Chapter 2	Chapter 2 Online Optional: Watch Video/ Notes/ Slides/ Application Problems	*Use function notation, including finding arithmetic combinations and compositions of functions. *Recognize and distinguish between functions and relations (equations). *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. *Determine the domain and range of relations and functions. *Write the equation that describes a function (for types given above) or circle given in description. *Use graphs of functions for analysis. *Find the inverse of a function.

3	Chapter 3	**Test 1 (Chapters 1- 2)** Chapter 3 Online Optional: Watch Video/ Notes/ Slides/ Application Problems	*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. Write the equation that describes a function (for types given above) or circle given in description. *Use graphs of functions for analysis.
4	Chapter 4	Chapter 4 Online Optional: Watch Video/ Notes/ Slides/ Application Problems	*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. Write the equation that describes a function (for types given above) or circle given in description. *Use graphs of functions for analysis.
5	Chapter 5	**Test 2 (Chapters 3- 4)** Chapter 5 Online Optional: Watch Video/ Notes/ Slides/ Application Problems	*Solve equations including literal equations, linear equations, quadratic equations by factoring and the quadratic formula, higher-order polynomial equations, equations involving rational expressions, equations involving radicals, and equations involving absolute value expressions, along with equations involving exponential or logarithmic functions. *Use function notation, including finding arithmetic combinations and compositions of functions. *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. Write the equation that describes a function (for types given above) or circle given in description. *Use graphs of functions for analysis. *Apply equations in this core outcome to real-world situations, such as depreciation, growth and decay, and max/min problems. *Examine and analyze data, make predictions/ interpretations, and do basic modeling.
6	Chapter 6 Chapter 7	Chapter 6 Online Chapter 7 Online Optional: Watch Video/ Notes/ Slides/ Application Problems	*Solve systems of equations by various methods, including matrices.
7		**Test 3 (Chapter 5-7)**	

8		**Final Exam** **(Chapters 1-7)**	