



Math 1414 College Algebra with Developmental Support Syllabus

Instructor: Whitney Hastings

Contact Information:

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Hours: Skype by appointment

Main Campus: 903-586-251

Course Prerequisite

Credit in Math 0406 or acceptable placement score/exemption.

Catalog Course Description

A brief review of real numbers, exponents, radicals, expressions, products and factoring, complex numbers, and linear equations. A study of quadratics; polynomial, rational, logarithmic and exponential functions; systems of equations; progressions; sequences and series, and matrices and determinants. Additional topics such as sequences, series, and conics may be included.

Student Learning Objectives/Outcomes

During this course, I as an instructor expect you, the student to

- develop a foundation of knowledge leading to enrollment in a credit-level mathematics course,
- nurture and implement an "I can" attitude in learning mathematics,
- continue to develop the intellectual and practical skills that are essential for all learning, and
- pursue improved personal and social responsibility.

It is my goal through the completion of this course that **every** student will be able to apply algebraic properties, concepts, and skills to represent problem situations and solve word problems and will have developed the empirical and quantitative skills to:

1. perform operations with real numbers and with complex numbers, polynomial expressions, and radical expressions;
2. solve linear equations, select higher degree polynomial equations in one variable, equations quadratic in form, and linear and quadratic inequalities;
3. solve systems of equations in two or more variables and systems of inequalities;
4. graph functions and/or recognize graphs of functions; state their domain and range; find the sum, difference, product, quotient, composition, and when possible, the inverse of functions and solve application problems with functions;
5. use polynomial and rational functions, their properties and their graphs to model and solve real-life problems;
6. graph and use exponential and logarithmic functions, including using the laws of logarithms, and work with exponential and logarithmic functions;
7. operate with matrices, as well as using accepted methods for employing matrices to solve systems of equation;
8. use sequences and series and understand conics if included;
9. demonstrate critical thinking by identifying, evaluating, and classifying, analyzing, synthesizing data and abstract ideas in various contexts and situations;

10. communicate sound mathematical reasoning and solutions of mathematical problems in written and oral forms;
11. collaborate with peers to solve mathematical problems.

This course serves as a prerequisite for MATH 1316 and provides the foundational concepts necessary for future trigonometry and calculus courses.

Course Philosophy

As an instructor at Jacksonville College, I embrace the doctrinal distinctives recognized by the college:

- The Bible is the inerrant, infallible word of God and is the final authority in all matters of belief and practice.
- There is one and only one living and triune God. He is Creator, Redeemer, Preserver and Ruler of the Universe.
- Christ is the eternal Son of God. In His incarnation, Jesus was conceived of the Holy Spirit and born of the Virgin Mary.
- Man is the special creation of God, who created us male and female.
- Salvation is the gracious act of God through faith in Jesus Christ and Him alone.
- God works through people, leading them by the Holy Spirit.
- Believers are to mature in the faith through discipleship and serve God and others through a New Testament Church.
- Jesus Christ will return personally and visibly in glory to the earth. Christ will judge all men according to His will.

In upholding this philosophy, I will provide a distinctly Christian environment in my classroom, demonstrate high standards of ethics and morality, pursue academic excellence, emphasize the Bible in my curriculum, programs, and services and accept all regardless of their race, gender, national origin, or disability, while promoting both social and personal responsibility.

Required Textbook and Materials

College Algebra Building Skills and Modeling Situations, by Charles P. McKeague, Katherine Yoshiwara, and Denny Burzynski, XYZ Textbooks, ISBN:1-936368-16-1 *Printed copy of text only necessary if YOU need it.*

Online Code for College Algebra (packaged with the text or sold separately). If you purchased a code for 0408 you may use the same code to access this course online. ***Online code is required.***

TI-83 Calculator or its equivalent is required.

Internet Access for Homework Assignments and Online Tests

<http://www.xyztextbooks.com/> Click on the "Students Start Here" link and follow the instructions.

Course Powerpoint Shows, all course documents, discussions, projects, and tests will be on Moodle at

<http://moodle.jacksonville-college.edu/login/index.php>

Instructional Methods

Methods of teaching and course activities used to assist students in meeting the course goals may include, but not be limited to:

- covering selected topics from chapters 1-7 in the printed text with the possible inclusion of online chapter 8-9;
- reading and writing assignments;
- class participation and discussions;
- individual and/or collaborative projects that require reflection and analysis;
- online homework assignments;
- and tests including a comprehensive final.

Course Grading Policy

It should be noted that enrollment in this course does not guarantee credit for this course. The final responsibility for learning lies with the student.

The course grade is the weighted mean of major exams, a comprehensive exam, online homework, projects and Lab Attendance.

Tests – 30%

Homework – 40%

Faith Project from Moodle – 10%

Final – 10%

Weekly Online Attendance – 10%

Extra Credit is available through www.xyzhomework.com. Each assignment will be applied to a category of grading listed above.

Attendance Policy

Online students are required to attend class just as traditional students are. Online students attend class by active participation in the course. Students attend their first class session by posting a response to the syllabus posted in the course on MOODLE. This indicates the student is active in the course. Any student who does not post a response to the syllabus discussion in MOODLE and enroll in the xyz course by the Add/Drop Date will be removed from the course. Students will be required to **log in** to the Moodle course and xyzhomework.com **once each week** during the term.

Academic Integrity

Because of who I am and what Jacksonville College represents,

- I expect academic honesty at all times. I will be honest and fair with you; I expect no less in return. Sharing answers on homework helps no one. Don't be misled into thinking that someone else's work is your own. Assistance with answers (including the appearance of such) on tests is dishonesty and/or theft and will result in a zero on the paper in question.

Creating Conditions for Successful Learning

Research shows success in math class depends very much on two factors: the amount of time spent working on the material, and the student's beliefs about mathematics and what it means to understand and do mathematics. With this in mind, the following suggestions are things you can do to increase your success in mathematics.

- Realize that mathematics is not just a set of procedures and that mathematical concepts involve a lot of thinking and reasoning. Consequently, being able to execute procedures accurately is only one part of doing well in this class.
- Realize that success in mathematics is less about "ability" and more about willingness to think and to work hard to make sense of things.
- A major key to success in math is working problems. The more problems you work, the more you'll understand and the more confident you'll become. This means that homework is a necessity, both for your learning and for your grade. You are experiencing a provision from God, and we must be good stewards of God's blessings.
- Take organized notes and use the resources available to you when you encounter difficult problems and/or concepts.

Instructor Goals for Continued Student Success

During your time in my class, I will strive to:

Provide a Christ-centered, quality education that prepares you for further educational endeavors – "Whatever you do, work at it with all your heart, as working for the Lord, not for human masters..." Colossians 3:23

Prepare you to demonstrate your Christian faith in every dimension of your life – “And the things you have heard me say in the presence of many witnesses entrust to reliable people who will also be qualified to teach others.” 2 Timothy 2:2

Foster in you a desire for lifelong learning – “Do your best to present yourself to God as one approved, a worker who does not need to be ashamed and who correctly handles the word of truth.” 2 Timothy 2:15

Accommodations for Students with Disabilities

Jacksonville College complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable accommodations for students with a disability. In accordance with Section 504 and ADA guidelines, Jacksonville College strives to provide reasonable accommodations to students who request and require them. The Federal regulations implementing Section 504 and the ADA establish that reasonable and appropriate academic accommodations must be provided to students with disabilities to allow equal access to educational opportunities. While providing accommodations, however, institutions of higher education are not required to lower academic standards or compromise the integrity of the school, department, or program. The Office of Disability Services recommends accommodations for students with disabilities in compliance with these Federal and State mandates. If you believe that you have a disability requiring accommodations, please contact the Office of Disability Services. (counselor.504@jacksonville-college.edu; 903 586 2518 ext. 7232.)

Honors Program

The Honors Program at Jacksonville College exists to provide ambitious students additional opportunities to develop higher level thinking skills and connect subject areas to the community through service, faith, and culture. If you are interested in applying for admission to the Honors Program, you may pick up an application in the Academic Dean's office.

Technical Support

If you experience any technical problems with your MOODLE account, you may send an email to: help@jacksonville-college.edu.

xyzhomework.com technical problems may be addressed by first trying the following:

1. Please use Firefox if it's available
2. Make sure your internet connection is consistent.
3. Hold your Shift key and then click the Refresh/Reload in your browser.
4. Check the student forums under SUPPORT.

Email Support

- support@xyzhomework.com

Phone Support

- 855-462-8488
Monday-Friday, 8am-5pm PT