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**Plainview Campus**

**School of Mathematics & Sciences**

**UNIVERSITY MISSION STATEMENT**

Wayland Baptist University exists to educate students in an academically challenging, learning-focused and distinctively Christian environment for professional success and service to God and humankind.

The School of Mathematics and Sciences emphasizes a rigorous, ethical approach to the study of mathematics and science. We believe that success in these disciplines requires a broad base of content knowledge and the development of the critical thinking skills necessary for the ongoing acquisition, processing and communication of current subject matter. The activities of the School, both academic and professional, intentionally reflect the Lordship of Jesus Christ and His centrality to all of Creation.

# COURSE NUMBER & NAME:

MATH1304-VC01 College Algebra

## TERM:

Summer, 2020

## INSTRUCTOR:

Dr. Elise Adamson

## CONTACT INFORMATION:

Office phone: 806-291-1129

WBU Email: adamsone@wbu.edu

## OFFICE HOURS, BUILDING & LOCATION:

No set hours for online course, contact me to set up a visit. Office in room 123 of Moody Science Building, Plainview campus. **Mailing Address**: Wayland Baptist University, 1900 W 7th ST, CMB #1301, Plainview, TX 79072

## COURSE MEETING TIME & LOCATION:

online

## CATALOG DESCRIPTION:

This course develops skills in rational expressions, radicals, complex numbers, graphs, second-degree equations in one or two variables, exponential and logarithmic functions, conic sections, sequences, series, and the binomial theorem

## PREREQUISITE:

MATH 1300 or placement

## REQUIRED TEXTBOOK AND RESOURCE MATERIAL:

**Lecture Notes:** Lecture Notes for College Algebra by Dr. Scott Franklin

(Available through the Wayland Bookstore or downloadable from Blackboard. If you choose to download the lecture notes, you will need to print them so you can fill them in as you watch the online lecture videos.)

**Lecture Videos:** watch them online through Blackboard (videos were recorded by Dr. Scott Franklin)

**Student Access Pack:** MyMathLab Student Access Pack

 **NOTE: VitalSource etextbook**

 NOTE: eTextbook cost included at registration. The fee includes courseware through Pearson. You are paying for access to the Pearson site where the book and exercises are located. If you OPT-OUT of the eTextbook in the classroom link prior to March 10th you must purchase the access elsewhere to participate in the class.

**Supplies:** All students need to have a scientific calculator that has at least log x, ln x, and the exponential function (). You may use a simple scientific calculator (such as TI-30 series, about $10-$15) or a graphing calculator (approximate cost $80-$120)- both types will work.

## OPTIONAL MATERIALS

**Textbook (hard copy):** INTERMEDIATE ALGEBRA FOR COLLEGE STUDENTS, 7th edition by Blitzer

***NOTE: The hard copy of the textbook is optional because the access code above will grant you access to an online copy of the textbook.***

## COURSE OUTCOMES AND COMPETENCIES:

1. The student will develop algebraic and quantitative skills useful in the study of other disciplines.
2. The student will be able to solve quadratic, rational, exponential, logarithmic, and radical equations.
3. The student will be able to perform algebraic operations on rational and radical expressions and on complex numbers.
4. The student will be able to identify various conic sections.
5. The student will be able to identify and find the sums of arithmetic and geometric sequences.
6. The student will develop algebraic techniques necessary for problem-solving and mathematical modeling.

## ATTENDANCE REQUIREMENTS:

As stated in the Wayland Catalog, students enrolled at one of the University’s external campuses should make every effort to attend all class meetings. All absences must be explained to the instructor, who will then determine whether the omitted work may be made up. When a student reaches that number of absences considered by the instructor to be excessive, the instructor will so advise the student and file an unsatisfactory progress report with the campus executive director. Any student who misses 25 percent or more of the regularly scheduled class meetings may receive a grade of F in the course. Additional attendance policies for each course, as defined by the instructor in the course syllabus, are considered a part of the University’s attendance policy. As an online course, attendance is measured with participation in activities (completing homework and quizzes.) Failure to complete 3 weeks of material is grounds for failure. Failure to start work before the census date may result in being dropped.

## STATEMENT ON PLAGIARISM & ACADEMIC DISHONESTY:

Wayland Baptist University observes a zero tolerance policy regarding academic dishonesty. Per university policy as described in the academic catalog, all cases of academic dishonesty will be reported and second offenses will result in suspension from the university.

## DISABILITY STATEMENT:

In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291-3765. Documentation of a disability must accompany any request for accommodations.

## COURSE REQUIREMENTS and GRADING CRITERIA:

There are 4 components to the final grade in this course.

1. **Homework Exercises:** You have homework exercises that must be completed for each section that we cover in the course. You will complete those online through the MyLab Math Interface. When you login to MyLab Math you will be able to click on Homework and view your homework exercises. You may rework missed exercises without penalty as many times as you wish before the due date.
2. **Weekly Quizzes:** By the end of each week of the course you will be required to complete an online quiz covering the sections from that week. The deadline for completing this quiz will be midnight on Sunday. You can take the quiz up to *three times* and your highest score will be counted. Each time you take the quiz, the questions will be randomly generated, but of the same type.
3. **Exams:** During the course, there will be two major exams: a Midterm and a Final. Each test will cover approximately half of the course. Both of these tests are to be taken **in person** at one of the external campuses or a testing center. They will be paper and pencil tests which will be emailed to your instructor for grading. They must be **proctored** by an approved representative of the University. Online proctoring may be used by those students who are unable to take the exam in person, student must have a webcam. There is a fee to use online proctoring. More details can be found in Blackboard. (**If COVID19 “stay-at-home” order still in place, all will need webcam to facilitate online proctoring**.)
4. **Lecture Video and Notes:** You will be required to watch the videos for this course and completely fill in the lecture notes for each section. This will be verified at each of the proctored exams. You will be required to bring lecture notes with you to these tests, but you cannot use them while taking the exam.

Homework 20%

Weekly Quizzes 25%

Exams 50%

Lecture Video and Notes: 5%

A: 90 – 100 B: 80 – 89 C: 70 – 79 D: 60 – 69 F: Below 60

**Grade Appeal Statement**: “Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Vice President of Academic Affairs/Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.”

## Topic Outline and Schedule appear below.

## ADDITIONAL INFORMATION

### Important Details

Here are a few VERY important details that you should make note of as you prepare to get the course underway:

1. The majority of the coursework will not be in Blackboard but instead at MyLab <https://www.pearsonmylabandmastering.com/northamerica/mymathlab/> This is where the MyLab Math tools for homework and quizzes will be located.
You need to set up your student account at MyLab Math before you begin any work in the course. You should have a Student Access Code and a Getting Started pack included with your textbook (Wayland now uses VitalSource etextbook for acquiring the MyLab access code see Blackboard for details). When setting up your MyLab account follow the MyLab tab in Blackboard.The first thing you'll need to do after setting up the account is to run the "Installation Wizard" and view "How to Enter Answers" tours and tip sheets for information about entering math notation.

2. As part of this course, you will watch the series of lecture videos and **fill in the lecture notes**. The proctor that you use for your midterm and final will verify that you have filled in the lecture notes. The videos and notes are downloadable for the Blackboard site. However, you will definitely need a broadband internet connection if you expect to watch the videos online. And if you download the lecture notes, **you will need to print them** to fill them in. Your proctor for your midterm and final will confirm that you have filled them out so be sure to take them with you to the proctored exams.

3. You will need a proctor for the midterm and the final, which will both be pencil and paper exams (NOT ONLINE), taken in person. For more information on who qualifies as a proctor and how to get them accepted as a proctor by WBUonline, visit the website:

<https://www.wbu.edu/wbu-online/current-students/proctored-exams.htm>

The deadline for securing a proctor for your midterm is **a week prior to the midterm exam*.*** Please make sure your paperwork is submitted to WBU Online (not your instructor) by this date.

Online Proctoring may be used by those students who are unable to take the exam in person. There is a fee to use online proctoring. More details can be found in Blackboard. **Format of exam subject to change due to COVID19.**

Email me with any questions you may have. Dr. Adamson’s email: adamsone@wbu.edu . Please remember that although you hear Dr. Franklin’s voice in the video, he is not the instructor for this class.)

## TOPIC OUTLINE

 **Rational Expressions and Equations** (Ch. 6)

 Domains of Rational Functions

 Multiplication and Division of Rational Expressions

 Addition and Subtraction of Rational Expressions

 Solving Rational Equations

 Applications of Rational Equations

 Variation

 **Roots, Radicals, and Complex Numbers** (Ch. 7)

 Roots and Radicals

 Rational Exponents

 Simplifying Radicals

 Adding, Subtracting, and Multiplying Radicals

 Dividing Radicals

 Solving Radical Equations

 Complex Numbers

 **Quadratic Functions** (Ch. 8)

 Solving Quadratic Equations by Completing the Square

 Solving Quadratic Equations by the Quadratic Formula

 Applications of Quadratic Equations

 Graphing Quadratic Equations

**Exponential and Logarithmic Functions** (Ch. 9)

 Composite and Inverse Functions

 Exponential Functions

 Logarithmic Functions

 Properties of Logarithms

 Common Logarithms

 Exponential and Logarithmic Equations

 Natural Exponential and Natural Logarithmic Functions

 **Conic Sections** (Ch. 10)

 The Parabola and the Circle

 The Ellipse

 The Hyperbola

 **Sequences, Series, and the Binomial Theorem** (Ch. 11)

 Sequences and Series

 Arithmetic Sequences and Series

 Geometric Sequences and Series

 The Binomial Theorem

## TENTATIVE SCHEDULE

| **Week/Date** | **Assignments** | **Due Date** |
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| **Week 1: May 25-31** | Videos and Notes for Ch 5 review, 6.1, 6.2Homework Exercises Ch 5 review, 6.1, 6.2Weekly Quiz covering Ch 5 review, 6.1, 6.2 | **Due by 11:59 p.m. on Sunday, May 31.** |
| **Week 2: June 1-June 7** | Videos and Notes for Sections 6.3, 6.4, 6.6Homework Exercises for Sections 6.3, 6.4, 6.6Weekly Quiz covering for Sections 6.3, 6.4, 6.6 | **Due by 11:59 p.m. on Sunday, June 7.** |
| **Week 3: June 8-June 14** | Videos and Notes for Sections 6.7, 6.8, 7.1Homework Exercises 6.7, 6.8, 7.1Weekly Quiz covering 6.7, 6.8, 7.1 | **Due by 11:59 p.m. on Sunday, June 14.** |
| **Week 4: June 15- June 21** | Videos and Notes for Sections 7.2-7.4Homework Exercises 7.2-7.4Weekly Quiz covering 7.2-7.4  | **Due by 11:59 p.m. on Sunday, June 21.** |
| **Week 5: June 22- June 28** | Videos and Notes for Sections 7.5-7.7Homework Exercises 7.5-7.7Weekly Quiz covering 7.5-7.7**Midterm Exam: Paper and Pencil exam (Proctored)****(Covers Chapter 5 review, Chapters 6 & 7)** | **Due by 11:59 p.m. on Sunday, June 28.****This needs to be completed between Monday, June 29 and Tuesday, July 7.** |
| **Week 6: June 29- July 5** | Videos and Notes for Sections 8.1-8.3Homework Exercises 8.1 – 8.3Weekly Quiz covering 8.1 – 8.3 | **Due by 11:59 p.m. on Sunday, July 5.** |
| **Week 7: July 6- July 12** | Videos and Notes for Sections 9.1-9.2Homework Exercises 9.1-9.2Weekly Quiz covering 9.1-9.2 | **Due by 11:59 p.m. on Sunday, July 12.** |
| **Week 8: July 13-July 19** | Videos and Notes for Sections 9.3-9.5Homework Exercises 9.3- 9.5Weekly Quiz covering 9.3 – 9.5 | **Due by 11:59 p.m. on Sunday, July 19.** |
| **Week 9: July 20- July 26** | Videos and Notes for Sections 10.1 – 10.4Homework Exercises 10.1 – 10.4Weekly Quiz covering 10.1 – 10.4 | **Due by 11:59 p.m. on Sunday, July 26.** |
| **Week 10: July 27 – August 2** | Videos and Notes for Sections 11.1- 11.3Homework Exercises 11.1 – 11.3Weekly Quiz covering 11.1 – 11.3 | **Due by 11:59 p.m. on Sunday, August 2.** |
| **Week 11: August 3- August 8** | Review for FinalNo assignments**Final Exam: Paper and Pencil exam (Proctored)****(Covers Chapters 8-11)** | **This needs to be completed between Monday, Aug 3 and Saturday August**  |