**Wayland 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 human kind.

College Algebra

WBU Online Winter 2018

MATH 1304 – VC01

**Instructor:**

Dr. Chris Thornhill

**Email**: thornhillc@wbu.edu (preferred method of contact)

**Office Phone:** 806-291-1131

**Course Description:**

**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.

**Prerequisites:** Two years of high school algebra or MATH 1300

**Required Resources:**

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

(Available through the Wayland Bookstore or downloadable from Blackboard)

**Student Access Pack:** MyLab Student Access Kit (ISBN: 032119991X) – Must be purchased.

**Supplies:** All students need to have a scientific calculator that has at least log x, ln x, and the exponential function ()

**Optional Resource:**

**Textbook (hard copy):** INTERMEDIATE ALGEBRA FOR COLLEGE STUDENTS, 6th edition by Blitzer (ISBN: 0-13-600762-7)

***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.***

**Assessment of Student Achievement:**

There are four components to student evaluation 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 Pearson’s MyMathLab (CourseCompass) Interface. Instructions for registering in and using MyMathLab are included on Blackboard. When you login to MyMathLab you will be able to click on Homework and view your homework exercises.
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 mailed to your instructor for grading. They must be **proctored** by an approved representative of the University.
4. **Lecture Video and Notes:** You will need to watch the videos for this course and completely fill in the lecture notes for each section. Although this will not be graded, it is necessary for helping you succeed in this class. These are tools for introducing you to the material and having that material as a reference for study. Please do not neglect either the videos or the notes.

**Assessment of Student Achievement: (cont.)**

Homework 20%

Weekly Quizzes 20%

Exams 60%

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

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 Executive Vice President/Provost to the 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.

**Outline and Outcome Competencies:**

 Be able to discuss and solve problems in the following areas:

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

 Domains of Rational Functions

 Multiplication and Division of Rational Expressions

 Addition and Subtraction of Rational Expressions

 Complex Fractions

 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

**Statement on Plagiarism and 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 Schedule (All times are for the Central Time Zone, so plan accordingly)

**Week 1: November 12 – November 18**

Videos and Notes for Ch. 5 and Sections 6.1 – 6.2

Homework Exercises Ch. 5 and Sections 6.1 – 6.2

Weekly Quiz covering Ch. 5 and Sections 6.1 – 6.2

**Due by Sunday at 11:59 p.m., November 18.**

**Week 2: November 26 – December 2**

Videos and Notes for Sections 6.3, 6.4, 6.6

Homework Exercises 6.3, 6.4, 6.6

Weekly Quiz covering 6.3, 6.4, 6.6

**Due by Sunday at 11:59 p.m., December 2.**

**Week 3: December 3 – December 9**

Videos and Notes for Sections 6.7, 6.8, 7.1

Homework Exercises 6.7, 6.8, 7.1

Weekly Quiz covering 6.7, 6.8, 7.1

**Due by Sunday at 11:59 p.m., December 9.**

**Week 4: December 10 – December 16**

Videos and Notes for Sections 7.2 – 7.4

Homework Exercises 7.2 – 7.4

Weekly Quiz covering 7.2 – 7.4

**Due by Sunday at 11:59 p.m., December 16.**

**“Week” 5: December 17 – January 6**

Videos and Notes for Sections 7.5 – 7.7

Homework Exercises 7.5 – 7.7

Weekly Quiz covering 7.5 – 7.7

**Due by Sunday at 11:59 p.m., January 6.**

**Week 6: January 7 – January 13**

Videos and Notes for Sections 8.1, 8.2, 8.3

Homework Exercises 8.1, 8.2, 8.3

Weekly Quiz covering 8.1, 8.2, 8.3

**Due by Sunday at 11:59 p.m., January 13.**

**Week 7: January 14 – January 20**

Videos and Notes for Sections 9.1, 9.2

Homework Exercises 9.1, 9.2

Weekly Quiz covering 9.1, 9.2

**Due by Sunday at 11:59 p.m., January 20.**

**Midterm Exam: Paper and Pencil exam (Proctored)**

**(Covers Chapters 6 – 8.3)
This needs to be completed by January 19.**

**Week 8: January 21 – January 27**

Videos and Notes for Sections 9.3 -- 9.5

Homework Exercises 9.3 -- 9.5

Weekly Quiz covering 9.3 -- 9.5

**Due by Sunday at 11:59 p.m., January 27.**

**Week 9: January 28 – February 3**

Videos and Notes for Sections 10.1 – 10.4

Homework Exercises 10.1 – 10.4

Weekly Quiz covering 10.1 – 10.4

**Due by Sunday at 11:59 p.m., February 3.**

**Week 10: February 4 – February 10**

Videos and Notes for Sections 11.1 – 11.3

Homework Exercises 11.1 – 11.3

Weekly Quiz covering 11.1 – 11.3

**Due by Sunday at 11:59 p.m., February 10.**

**Week 11: February 11 – February 16**

Review for Final

No assignments

**Final Exam: Paper and Pencil exam (Proctored)**

**(Covers Chapters 9 – 11)**

**This needs to be completed by February 16.**

### 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.

**Academic Honesty:** Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to this course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanctions to any student involved.

### 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 – the homework and quizzes – will not be in Blackboard but instead at MyMathLab (Pearson’s MyLab and Mastering). However, your course on the Pearson site will be linked through your Blackboard account so that you do not have to log in to a separate website. Directions for registering for Pearson’s MyLab and Mastering are provided on Blackboard, and you will always login to MyMathLab through Blackboard. To log in to Blackboard, go to <http://www.wbu.edu> and click the Blackboard link under the “Resources” in the top right section of the screen.

You need to set up your student account at Pearson’s MyMathLab before you begin any work in the course. You should have a Student Access Code and a Getting Started pack included with your textbook, or you can purchase your access code online when you first follow the link to the Pearson site. 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 videos and book are downloadable from 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.

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.

If you live in a city with a Wayland campus, you must take the tests on that campus, so you do not need to submit a proctor request form. However, you should contact the campus the week before your test to arrange a date and time for you to take the test, to find out where the test will be administered, and to give them the course number (MATH1304 **VC01**) and instructor name (Dr. Thornhill).

For the Plainview campus, contact the WBU Online offices at 800-203-9048.

For external campuses, see the listing at [this page](http://www.wbu.edu/about_wayland/campus_locations/) for contact information. If you cannot take the tests on a Wayland campus, you must have your proctor approved by Wayland before they can administer the tests. The proctor must be approved every term (but only once per term) even if they have proctored tests for Wayland in past terms. Commonly used proctors are librarians holding a Master of Library Sciences, authorized employees at U.S. Military Education centers, and college testing centers (like Sylvan Learning). See the proctor request form for more details. For tips on finding a proctor, go to [this link](https://www.wbu.edu/wbu-online/current-students/find-a-proctor.htm).

The proctor request form is located at [this page](https://old.wbu.edu/academics/online_programs/proctor/proctorrequest_student.asp). Once the form is filled out, the proctor will receive an email requesting they provide certain information for verification. When the information has been provided, the Virtual Campus will approve or deny the request and will notify both the student and the proctor by email. **This entire process must be completed at least a week before the Midterm**. Do not forget to contact the proctor the week before the test to arrange a date and time and location (and to let them know the course number and instructor name).
Please email me with any questions you may have: Dr. Thornhill's email: thornhillc@wbu.edu.