School of Mathematics and Sciences

Virtual Campus – Spring 2009
Feb 23, 2009 – May 16, 2009

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

College Algebra

MATH 1304 – VC01/VC02

Instructor:

Dr. Scott Franklin
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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)

Lecture Videos: DVD with Lecture Videos
(Available through the Wayland Bookstore or downloadable from Blackboard)

Student Access Pack: MyMathLab Student Access Kit (ISBN: 0-13-17894-X)

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

Optional Resource:

Textbook (hard copy): INTERMEDIATE ALGEBRA FOR COLLEGE STUDENTS, 7th edition by Angel (ISBN: 0-13-238357-8)

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 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 MyMathLab Course Interface. Instructions for using MyMathLab are included in your textbook. When you login to CourseCompass/MyMathLab you will be able to click on Homework and view your homework exercises. (see attachment)
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,

each week. You can take the quiz up to ***three times*** and your highest score will be counted. Each time you take the test, 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 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 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 it with you to these tests, although you cannot use it while taking the exam.

Assessment of Student Achievement: (cont.)

Homework 20%
Weekly Quizzes 30%
Exams 40%
Lecture Video and Notes: 10%

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

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

Course Schedule (All times are for the Central Time Zone, so plan accordingly)

Course Schedule

Week 1: **February 23 – March 1**
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., March 1.

Week 2: **March 2 – March 8**
Videos and Notes for Sections 6.3 – 6.5
Homework Exercises 6.3 – 6.5
Weekly Quiz covering 6.3 – 6.5
Due by Sunday at 11:59 p.m., March 8.

Week 3: **March 9 – March 15**
Videos and Notes for Sections 6.6 – 7.2
Homework Exercises 6.6 – 7.2
Weekly Quiz covering 6.6 – 7.2
Due by Sunday at 11:59 p.m., March 15.

SPRING BREAK (March 16 – March 20)

Week 4: **March 23 – March 29**
Videos and Notes for Sections 7.3 – 7.5
Homework Exercises 7.3 – 7.5
Weekly Quiz covering 7.3 – 7.5
Due by Sunday at 11:59 p.m., March 29

Week 5: **March 30 – April 5**
Videos and Notes for Sections 7.6 – 8.1
Homework Exercises 7.6 – 8.1
Weekly Quiz covering 7.6 – 8.1
Due by Sunday at 11:59 p.m., April 5

Week 6: **April 6 – April 12**
Videos and Notes for Sections 8.2 – 8.3, 8.5
Homework Exercises 8.2 – 8.3, 8.5
Weekly Quiz covering 8.2 – 8.3, 8.5
Due by Sunday at 11:59 p.m., April 12

Midterm Exam: Paper and Pencil exam (Proctored)
(Covers Chapters 6 – 8)
This needs to be completed by April 19.

Week 7: **April 13 – April 19**
Videos and Notes for Sections 9.1 – 9.3
Homework Exercises 9.1 – 9.3
Weekly Quiz covering 9.1 – 9.3
Due by Sunday at 11:59 p.m., April 19.

Week 8: **April 20 – April 26**
Videos and Notes for Sections 9.4, 9.5/9.7, 9.6
Homework Exercises 9.4, 9.5/9.7, 9.6
Weekly Quiz covering 9.4, 9.5/9.7, 9.6
Due by Sunday at 11:59 p.m., April 26.

Week 9: **April 27 – May 3**
Videos and Notes for Sections 10.1 – 10.3
Homework Exercises 10.1 – 10.3
Weekly Quiz covering 10.1 – 10.3
Due by Sunday at 11:59 p.m., May 3.

Week 10: **May 4 – May 10**
Videos and Notes for Sections 11.1 – 11.4
Homework Exercises 11.1 – 11.4
Weekly Quiz covering 11.1 – 11.4
Due by Sunday at 11:59 p.m., May 10.

Week 11
Review for Final
No assignments

Final Exam: Paper and Pencil exam (Proctored)
(Covers Chapters 9 – 11)
This needs to be completed by May 16.

It is university policy that no otherwise qualified disabled person be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the University. Students should inform the instructor of existing disabilities at the first class meeting

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 CourseCompass (http://www.coursecompass.com). This is where the MyMathLab tools for homework and quizzes will be located.

You need to set up your student account at CourseCompass before you begin any work in the course. You should have a Student Access Code and a Getting Started pack included with your textbook. When setting up your account you will also need the course ID.

COURSE ID FOR WINTER TERM: franklin43243

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 note book. The videos and book 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. As I mentioned, 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. As I mentioned earlier in this announcement, you will need a proctor for the midterm and the final, which will both be pencil and paper exams, taken in person. For more information on who qualifies as a proctor and how to get them accepted as a proctor by the Virtual Campus, visit the website:
http://www.wbu.edu/academics/online_programs/works/Proctorform/ProctorRequest.htm
The deadline for securing a proctor for your midterm is ***March 23***. Please make sure your paperwork is submitted to the Virtual Campus (not your instructor) by this date.

Please email me with any questions you may have: Dr. Franklin's email: franklins@wbu.edu.