

Intermediate Algebra

Virtual Campus Spring 2014

MATH 1300 – VC01

**Instructor:** Dr. Chris Thornhill

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**Course Description:**

**Description:** This course develops skills in basic concepts of algebra, real numbers, linear equations and inequalities, polynomials, systems of equations and inequalities, and graphing and functions.

**Prerequisites:** This class is generally for students with some background in high school algebra (at least a semester). If you have not had any, ACAC MATH is strongly suggested. If you have (recently) had two years of high school algebra, take MATH 1304 (College Algebra).

**Required Resources:**

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

(These are 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.)

**Student Access Pack:** MyMathLab Student Access Pack (ISBN: 978-0-321199-91-1)

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

**Optional Resource:**

**Textbook (hard copy):** INTERMEDIATE ALGEBRA FOR COLLEGE STUDENTS, 6th edition by Blitzer (ISBN:0-321-75893-5)

***NOTE: The hard copy of the textbook is optional because the access code from the Student Access Pack 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 CourseCompass/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 25%

Weekly Quizzes 25%

Exams 50%

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

**Outline and Outcome Competencies:**

To understand and apply the following concepts:

**Linear Equations** Term, Coefficient, Degree

Like and Unlike Terms, Simplification

Solving Linear Equations

Mathematical Models, Translating from Words to Formulas

**Sets** Variable, Constant, Algebraic Expressions

Sets, Elements, Null Set

Real, Natural, Whole, Rational, and Irrational Numbers, Integers

Subset, Interaction, Union

**Properties of Real Numbers** Double Negatives, Absolute Value

Commutative, Associative, Distributive, Identity, Inverse

Order of Operations

Roots and Powers

Scientific Notation

**Graphs** Quadrants

Plotting Points

Graphing Functions

**Functions** Relation, Function, Domain, Range

Linear Functions, Intercepts, Slope

Standard Form, Slope-Intercept Form, Point-Slope Form

Parallel and Perpendicular Linear Functions

Adding, Subtracting, Multiplying, and Dividing Functions

Graphing Linear Inequalities

**Linear Inequalities** Dividing and Multiplying by Negative Numbers

Number Line, Interval Notation, Solution Set

Compound Inequalities

Absolute Values

Systems of Linear Equalities

**Systems of Linear Equations** No Solutions, Infinite Solutions, One Solution

Solving by Graphing, Substitution, Elimination

Three-Variable Problems

**Polynomials** Degree, Leading Term, Leading Coefficient

Adding, Subtracting, and Multiplying Polynomials, FOIL

Factoring, Greatest Common Factor, Grouping

Solving Polynomial Equations

Special Factoring Formulas

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

### Course Schedule

**Week 1: February 24 – March 2**

Videos and Notes for Sections 1.1 – 1.2

Homework Exercises Sections 1.1 – 1.2

Weekly Quiz covering Sections 1.1 – 1.2

**Due by 11:59 p.m. on Sunday, March 2.**

**Week 2: March 3 – March 9**

Videos and Notes for Sections 1.3 – 1.4

Homework Exercises 1.3 – 1.4

Weekly Quiz covering 1.3 – 1.4

**Due by 11:59 p.m. on Sunday, March 9.**

**Week 3: March 17 – March 23**

Videos and Notes for Sections 1.5 – 1.7

Homework Exercises 1.5 – 1.7

Weekly Quiz covering 1.5 – 1.7

**Due by 11:59 p.m. on Sunday, March 23.**

**Week 4: March 24 – March 30**

Videos and Notes for Sections 2.1 – 2.3

Homework Exercises 2.1 – 2.3

Weekly Quiz covering 2.1 – 2.3

**Due by 11:59 p.m. on Sunday, March 30.**

**Week 5: March 31 – April 6**

Videos and Notes for Sections 2.4 – 2.5

Homework Exercises 2.4 – 2.5

Weekly Quiz covering 2.4 – 2.5

**Due by 5:00 p.m. on Sunday, April 6.**

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

**(Covers Chapters 1 – 2)   
This needs to be completed between Monday, April 7 and Monday, April 14.**

**Week 6: April 7 – April 13**

Videos and Notes for Sections 3.1 – 3.3

Homework Exercises 3.1 – 3.3

Weekly Quiz covering 3.1 – 3.3

**Due by 11:59 p.m. on Sunday, April 13.**

**Week 7: April 14 – April 20**

Videos and Notes for Sections 4.1 – 4.2, 4.4

Homework Exercises 4.1 – 4.2, 4.4

Weekly Quiz covering 4.1 – 4.2, 4.4

**Due by 11:59 p.m. on Tuesday, April 22**

**(Due to Easter holiday).**

**Week 8: April 22 – April 27**

Videos and Notes for Sections 5.1 – 5.2

Homework Exercises 5.1 – 5.2

Weekly Quiz covering 5.1 – 5.2

**Due by 11:59 p.m. on Sunday, April 27.**

**Week 9: April 28 – May 4**

Videos and Notes for Sections 5.3 – 5.4

Homework Exercises 5.3 – 5.4

Weekly Quiz covering 5.3 – 5.4

**Due by 11:59 p.m. on Sunday, May 4.**

**Week 10: May 5 – May 11**

Videos and Notes for Sections 5.5, 5.7

Homework Exercises 5.5, 5.7

Weekly Quiz covering 5.5, 5.7

**Due by 11:59 p.m. on Sunday, May 11.**

**Week 11**

Review for Final

No assignments

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

**(Covers Chapters 3 – 5)**

**This needs to be completed between Monday, May 12 and Saturday, May 17.**

### 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 – 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 on the left side 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. 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/proctor/proctorrequest.htm>

You must secure a proctor at least one week before the midterm, so make sure to do this early so that you will not miss the deadline. Please make sure your paperwork is submitted to the Virtual Campus (not your instructor).  
  
Please email me with any questions you may have: Dr. Thornhill’s email: [thornhillc@wbu.edu](mailto:thornhillc@wbu.edu).