MTH 111: College Algebra Spring 2020, CRN: 42235 Class meetings: TBA

Instructor: Stanley Leung

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Course Description:

Explores relations and linear, quadratic, exponential, polynomial, rational and logarithmic functions. Includes theory of equations, matrices and determinants.

Prerequisite: MTH 095 Intermediate Algebra or equivalent with a grade of C or better.

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- 1. Interpret graphical information, such as identifying types of functions, translations, inverses, intercepts, and asymptotes.
- 2. Solve a variety of symbolic equations and inequalities, such as rational, absolute value, exponential, radical, logarithmic, and linear systems.
- 3. Construct appropriate models for real world problems, such as fitting an algebraic function model to a set of data, and system of linear equations.

Required Materials:

- Textbook: *College Algebra*, by Abramson, et al., Openstax College, Rice University, 2017; you can get a free electronic copy at: https://openstax.org/details/books/College Algebra Course Key: linnbenton 7308 2610 for WebAssign
- Graphing Calculator: TI83 or TI84.
- Software: MS Excel (for graphs or computations)

Class format

Online instruction

Grading Criteria

Points Allocated		Grade Assignment
The final course grade will be con Homework assignments In-class assignments Two tests Five quizzes	nputed as follows: 35 points 15 points 20 points 10 points	A: 90 – 100 points B: 80 – 89.99 points C: 70 – 79.99 points D: 60 – 69.99 points F: 0 – 59.99 points
Final examination	20 points	

Note: Your scores for this course are stored on WebAssign.

Understanding comes after studying.

"The capacity to learn is a gift; the ability to learn is a skill; the willingness to learn is a choice." Brian Herbert (American author)

How to do well in this course?

To do well in this course, **your responsibilities** include: **Do all required course work**. Take quizzes, tests, and the final examination. Submit required in-class assignments and homework assignments on time. Study lecture notes (stored on Moodle) and the textbook daily. Apply the three principles of mastering math skills: **Practice**, **Practice**, and **Practice**. Understand the connections between concepts. Pay close attention to definitions, formulas, and technical details.

Help is always available

[1] Tutors from Math Desk (WH-226), Albany campus:

"The Math Desk in the Learning Center has long been a space to support students using mathematics in ANY class, both "traditional" and applied. Now we've gone digital!

Starting next week (April 6), students will be able to get drop-in math help via the virtual Math Desk and Math Cafe in Zoom. The Math Desk can be accessed via https://linnbenton.zoom.us/j/579890953 and is open the following hours:

Monday - Thursday: 8am - 9pm

Friday: 8am - 5pm Saturday: 11am - 4pm

The Math Cafe is designed specifically for students in MTH 15 - MTH 111. Students can access it via https://linnbenton.zoom.us/j/954138012. They are open: Monday-Friday, 8am-5pm.

In this new era of remote learning, we don't have a fancy building to hang a banner from. We don't have campus tours. What we do have is an amazing group of instructors with whom we share a common goal: Student success! This is why it is so important that YOU help us get the word out by sharing information about our services with your students! Please add our information to your syllabi, to your Moodle shells, to whatever it is you are sharing with students to let them know we're here to support them in their math journey this term.

If you have any questions, please don't hesitate to reach out to me or Brie Wood (for the Math Cafe), and thank you for all you do!"

Gary Brittsan

Instructional Specialist - Learning Center Math Domain

WH-228

Phone: 541-917-4313

[2] Instructor's office hours 2:00 – 3:00 P.M., Monday - Friday 8:00 – 9:00 P.M., Monday - Thursday Appointments are welcome.

In-class assignments

Use WebAssign to do your in-class assignments (daily assignment)

You have 5 attempts for each problem (or part of a problem).

No make-up in-class assignments.

Homework assignments

Use WebAssign to do your homework assignments.

You have 5 attempts for each problem (or part of a problem).

Policy on late homework assignments

[1] You are allowed to turn in one late homework assignment (up to **72 hours late**) without penalty. Use it for an emergency only.

[2] 1 day late (t < 24 hours): 90%, where t = number of hours after due time

2 days late (24 < t < 48 hours): 70% 3 days late (48 < t < 72 hours): 50%

4 or more days late: No credit

Ouizzes

You will have 5 quizzes. The topics for a quiz will be announced on Moodle.

Quiz time: 30 minutes

3 attempts for each problem

Quiz dates: Friday, Weeks 2, 3, 5, 6, 7. No make-up quizzes.

No make-up quizzes

Tests

You will have 2 tests. Test time: 60 minutes

You have 2 attempts for each problem. Review test materials stored on Moodle

Test 1: Friday, Week 4 (May 1); **Test 2**: Friday, Week 8 (May 29)

Policy on tests:

- Make-up tests will not be given under any circumstances.
- If you missed a test and have a **documented reason** or **verifiable emergency**, the credit for the test will be transferred to the final exam. That is, the credit for your final exam is 30 (= 20 + 10) points.

Final Examination

The final examination is comprehensive and covers all lectures through the end of the spring term. **No make-up final examination**.

Final exam date: Week 10 (2:00 P.M., Friday, June 12): 1 hour 50 minutes

Incomplete Policy

- If you are **passing the course** (C or above) **and** have a **documented reason** or **verifiable emergency** for not being able to complete the course, I may be able to grant you an incomplete. You must obtain my written agreement if you wish to have a grade of incomplete recorded.
- If you miss the final exam, are passing Math 111 and have a **documented reason** or **verifiable emergency**, you will be given an Incomplete. If you miss the final exam and your absence is unexcused, you will receive whatever grade you have earned by your total points (maximum 80) prior to the final exam.

Special Circumstances:

Students who have any emergency medical information the instructor should know of, who need special arrangements in the event of evacuation, or students with documented disabilities who may need accommodations, should make an appointment with the instructor as early as possible, no later than the first week of the term.

Request for Special Needs or Accommodations

You should meet with your instructor during the first week of class if:

- 1. You have a documented disability and need accommodations.
- 2. Your instructor needs to know medical information about you.
- 3. You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources (CFAR) Online Services webpage every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR Website for steps on how to apply for services or call 541-917-4789.

Center for Accessibility Resources Main Office, Red Cedar Hall 105 (RCH-105)

Monday-Friday 9:00 a.m. - 3:00 p.m.

Phone: (541) 917-4789 Email: cfar@linnbenton.edu

Support Lab, Red Cedar Hall 114 (RCH-114)

Monday-Friday 8:00 a.m. - 3:00 p.m.

Phone: (541) 917-4343 Email: cfarlab@linnbenton.edu

The LBCC Center for Accessibility Resources and YOU!

The Center for Accessibility Resources provides assistance to students who have documented disabilities by:

- Reviewing documentation, provided by the student, that provides evidence of disability
- Planning reasonable accommodations
- Coordinating services in the classroom
- Providing support (i.e. assistive technology, testing accommodations, and classroom accommodations)
- Success coaching and advocating

If you have a disability and feel that you will need accommodations as a student at Linn-Benton Community College, we are here to support you.

LBCC Comprehensive Statement of Nondiscrimination

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy P1015 in our <u>Board Policies and Administrative Rules</u>. Title II, IX, & Section 504: Scott Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806, LBCC, Albany, Oregon. To report: <u>linnbenton-advocate.symplicity.com/public report</u>

Brief Basic Needs Statement:

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Single Stop Office for support (SinglestopatLBCC@linnbenton.edu, 541-917-4877, or visit us on the web www.linnbenton.edu under student services for current students). Our office can help students get connected to resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

Message from Ann Buchele:

"Given the ongoing impact of COVID-19 and the governor's Stay Home, Save Lives executive order, LBCC will be staying with online/remote instruction for the entire Spring term. This decision has been made now so students can plan their work schedules, childcare, etc... through the end of the term. (There may be some exceptions if we are allowed face to face instruction at any point in the term. I ask that you work with your dean.) "

Ann Buchele Vice-President, Academic Affairs and Workforce Development Linn-Benton Community College April 2, 2020



To be fair to all students in Math 111, the instructor strictly enforces the course policies. For individual situations not covered in the course policies, the instructor will act at his discretion. Additional information relating to the course material or assignments will be announced on Moodle.

The amount of time you spend on homework problems as well as in-class problems (daily problems) will directly affect how much you learn, your exam scores and, therefore, your grade in the course.

APPROXIMATE COURSE SCHEDULE (Not carved in stone yet)

Week	Chapter	Topics	
1	1.1	Order of operations	
	2	Review of linear equations, and quadratic equations	
2	3	Functions	
2	2		
3	3	Functions	
	4	Linear functions	
		Review for Test 1 (Check Moodle for review materials)	
4	4	Linear functions	
		Test 1	
5	5	Polynomial and rational functions	
6	5	Polynomial and rational functions	
7	6	Exponential functions	
		Review for Test 2 (Check Moodle for review materials)	
8	6	Logarithmic functions	
		Test 2	
9	7	Systems of equations and inequalities	
10	7	Systems of equations and inequalities	
		Final examination: 2:00 p.m., Friday, June 12	

Note: This outline gives you a rough sense of our course of study. We go faster on some simple topics, and slower on some important concepts. We will cover and learn as much as we can.

Important:

- Check Moodle daily.
- Class notes, course-related materials, test review materials, and announcements are stored on Moodle.
- © I hope you will enjoy your guided tour through the wonderland of College Algebra. ©

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- 1.1 Real Numbers: Algebra Essentials
- 1.2 Exponents and Scientific Notation
- 1.3 Radicals and Rational Exponents
- 1.4 Polynomials
- 1.5 Factoring Polynomials
- 1.6 Rational Expressions

2 Equations and Inequalities

Introduction to Equations and Inequalities

- 2.1 The Rectangular Coordinate Systems and Graphs
- 2.2 Linear Equations in One Variable
- 2.3 Models and Applications
- 2.4 Complex Numbers
- 2.5 Quadratic Equations
- 2.6 Other Types of Equations
- 2.7 Linear Inequalities and Absolute Value Inequalities

3 Functions

Introduction to Functions

- 3.1 Functions and Function Notation
- 3.2 Domain and Range
- 3.3 Rates of Change and Behavior of Graphs
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- 3.5 Transformation of Functions
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4 Linear Functions

Introduction to Linear Functions

- 4.1 Linear Functions
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- 4.3 Fitting Linear Models to Data

5 Polynomial and Rational Functions

Introduction to Polynomial and Rational Functions

- 5.1 Quadratic Functions
- 5.2 Power Functions and Polynomial Functions
- 5.3 Graphs of Polynomial Functions
- 5.4 Dividing Polynomials
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- 5.6 Rational Functions
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6 Exponential and Logarithmic Functions

Introduction to Exponential and Logarithmic Functions

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7 Systems of Equations and Inequalities

Introduction to Systems of Equations and Inequalities

- 7.1 Systems of Linear Equations: Two Variables
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- 7.4 Partial Fractions
- 7.5 Matrices and Matrix Operations
- 7.6 Solving Systems with Gaussian Elimination
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