



Lincoln University

Math 10 – College Mathematics

COURSE SYLLABUS SPRING 2020

- Instructor:** Professor Len Filane
Lecture Schedule: Wd 9.00-11.45 am
Credits: 3 units / 45 lecture hours
Level: Introductory (I)
Office Hours: Wd. 4.15-5.15 pm, teacher's lounge, main bldg., 4th fl.
e-mail: lfilane@lincolnuca.edu
Textbooks: **Introductory and Intermediate Algebra**, by M. Lial, J. Hornsby, T. McGinnis. Publisher: Pearson, 5th Ed. ISBN 13: 978-0-321-86553-3, ISBN 10: 0-321-86553-7
- Complimentary**
Textbook: Blitzer, Robert F. **Intermediate Algebra for College Students**. 7th. Prentice Hall. 2016 ISBN-13: 978-0134178943
Last Revision: Jan. 7, 2020

DISCLAIMER

This syllabus may be changed or updated according to the instructor's discretion.

CATALOG DESCRIPTION

Algebra: fundamental algebraic concepts and operations, number bases, linear equations and inequalities, functions, graphing. Graphs and functions: study of functions including exponents and radical polynomials, geometric series, rational expressions, quadratic equations, and logarithms.

COURSE LEARNING OUTCOMES¹

	Course LO	Program LO	Institutional LO	Assessment
1	Analyze, interpret, and communicate results of exponential, logarithmic, rational, and discrete models in a logical manner from four points of view – visual, formula, numerical, and written.	GELO 3	ILO 1a, ILO 2a	Tests, assignments

¹ Detailed description of learning outcomes and information about the assessment procedure are available at the [Center for Teaching and Learning](http://ctl.lincolnuca.edu) website (ctl.lincolnuca.edu).

2	Evaluate real-world situations and distinguish between and apply exponential, logarithmic, rational, and discrete function models appropriately.	GELO 5	ILO 1a	Tests, assignments
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INSTRUCTIONAL METHODS

This is a classroom instruction course.

Lectures, demonstration of the solutions for problems by the instructor, solving problems in class independently and in groups, class discussions, “student teaching”, at-the-board students’ demonstrations of the solutions, frequent discussions of the homework.

Students are strongly encouraged to use additional resources, such as the Internet, the library, etc. The emphasis will be on learning by doing.

Assignments and projects require students to actively use resources of the library. Detailed guide to business *resources of the library* as well as the description of Lincoln University approach to *information literacy* are available at the [Center for Teaching and Learning](http://ctl.lincolnuca.edu) website (ctl.lincolnuca.edu).

ACADEMIC HONESTY & INTEGRITY HONOR CODE

The faculty, administration, and staff reinforce academic honesty and principles of academic honor. Independent learning is vital to the requirements of honesty and integrity in the performance of academic assignments, both in the classroom and outside. Students should avoid academic dishonesty in all of its forms, including plagiarism, cheating, and other forms of academic misconduct. The University reserves the right to determine what constitutes a violation of academic honesty and integrity.

ASSESSMENT

TWO-FOUR CLASS QUIZZES

HOMEWORK

CLASS WORK/CLASS PARTICIPATION

MIDTERM EXAM

FINAL EXAM

CALCULATION OF FINAL GRADES:

Homework:	7%
Quizzes :	20%
Midterm Exam:	23%
Final Exam :	35%
Class Participation:	15%

GRADING SCALE: (Should follow Department and/or College Template)

Grade	A	B	C	D	F
GPA Points	4.0	3.0	2.0	1.0	0
%	90-100	80-89	70-79	60-69	less than 60

Re-taking or making up of the quizzes and exams will not be offered.

CLASS WORK (class participation):

Your goal should be to demonstrate the grasp of the concepts, ability to solve problems and critical thinking skills in analyzing them. You should strive to ask relevant questions, volunteer relevant answers, as well as volunteer to solve problems on the board, and actively participate in class discussions. If you were tardy or missed a class you did not participate in class work. It may be reflected in your grade for class work.

Class time is for learning only. You should refrain from discussing any issue that is not directly related to the processes of learning and concept understanding.

Issues related to grades for tests or teaching methodology should be raised only outside of class time.

Class work is graded on the scale of 0-10.

HOMEWORK

Written HW is graded on a scale 0-10. Since its impossible for me to exactly predict the rate of covering the material, I will give homework every class as we move forward. I will collect homework on selected days only. Bring your current homework to every class. Your homework must be in a ring binder, stapled, be neat and legible. Avoid submitting “dog ears”! If you write chaotically I would not be able to follow your work, hence I would not be able to grade it. HW that does not meet the above outlined requirements will be rejected and awarded zero points. Show your work in detail. If you do not show all the work required to complete the homework problems, I will reduce your homework credit. Just showing the answer will not be accepted for any credit.

All homework is to be done by the enrolled student and must be your own work. Any attempt to copy or re-use homework or share the same work between the students will result in a zero credit.

No late homework will be accepted. I will not accept any HW after my announcement of the end of the collection process. If you know that you will be absent in class, please email your scanned homework to me prior to the beginning of the current class. If you have a question or an issue regarding your HW, then the best way to resolve it is after class hours.

Do not copy the solutions from the instructor’s solution manual or online. If you do it, you will be guilty of plagiarism which is a violation of student conduct code, and may result in you being disciplined, suspended from class or expelled from the school.

UNIVERSITY ATTENDANCE POLICY:

Lincoln University uses the class method of teaching, which assumes that each student has something to contribute and something to gain by attending class. It further assumes that there is much more instruction absorbed in the classroom than can be tested on examinations. Therefore,

students are expected to attend all regularly scheduled class meetings and should exhibit good faith in this regard.

INSTRUCTOR'S ATTENDANCE POLICY:

Attendance is mandatory. I frown on tardiness. If you are frequently late to class, please review your schedule and make the necessary adjustments. Late arrivals are disruptive to class, they adversely affect the performance of all.

If you are late to a quiz or exam you will not be allowed to take it.

UNIVERSITY ACADEMIC INTEGRITY STATEMENT:

Students are responsible for proper conduct and integrity in all of their scholastic work. They must follow a professor's instructions when completing tests, homework, and laboratory reports, and must ask for clarification if the instructions are

COURSE SCHEDULE

<p>Week 1 Solving Linear Equations in One Variable Solving Linear Equations with Fraction and Decimal Coefficients An Introduction to Problem Solving Percent Change and Interest Applications</p>	<p>Week 2 Solving Linear Inequalities Solving Absolute Value Equations and Inequalities</p>
<p>Week 3 The Rectangular Coordinate System and Graphing Linear Equations Graphing Linear Equations with Intercepts The Slope of a Line Graphing Linear Equations with Slope Applications of Slope and Parallel and Perpendicular Lines Equations of Lines</p>	<p>Week 4 Equations of Parallel and Perpendicular Lines Graphing Linear Inequalities Introduction to Functions Function Notation The Vertical Line Test and Graphs of Functions</p>
<p>Week 5 Solving Systems of Linear Equations in Two Variables by Graphing Solving Systems of Linear Equations in Two Variables Algebraically Systems of Linear Equations in Two Variables and Problem Solving Mixture Problems and Systems of Linear Equations in Two Variables Solving Systems of Linear Inequalities</p>	<p>Week 6 Adding and Subtracting Polynomials and Polynomial Functions Multiplying Polynomials Special Products of Binomials and Multiplying Polynomial Functions Dividing Polynomials and Polynomial Functions</p>
<p>Week 7 Use the remainder and factor theorems The Greatest Common Factor and Factoring by Grouping Factoring Trinomials Factoring Special Products Solving Polynomial Equations by Factoring Manage</p>	<p>Week 8 Domain of Rational Expressions and Simplifying Rational Expressions Multiplying and Dividing Rational Expressions Adding and Subtracting Rational Expressions Simplifying Complex Rational Expressions Solving Polynomial Equations by Factoring</p> <p>MID-TERM EXAM</p>
<p>Week 9 Operations with Radical Expressions</p>	<p>Week 10 Proportions and Similar Figures with Rational Equations</p>

Dividing Radical Expressions and Rationalizing Denominators Solving Rational Equations and Using Rational Functions	Uniform Motion, Work, and Problem Solving Understanding Radical Expressions Simplifying Radical Expressions Rational Exponents
Week 11 Solving Radical Equations Radical Functions Introduction to Complex Numbers Multiplying and Dividing Complex Numbers	Week 12 Solving Quadratic Equations Using the Square Root Property Solving Quadratic Equations by Completing the Square Solving Quadratic Equations Using the Quadratic Formula Solving Equations by Using Quadratic Methods
Week 13 Problem Solving with Quadratic Equations Parabolas and Their Properties Graphing Quadratic Functions	Week 14 Transformations of Parabolas Graphing Quadratic Functions Introduction to Logarithm
WEEK 15 <u>REVIEW</u>	