DE LA SALLE UNIVERSITY
College of Science
Department of Mathematics

ALGECON– *College Algebra for Economics Students*
Prerequisite: *Prerequisite to:*

Instructor:_____   **Contact details:**_____
Consultation Hours:_____   **Class Schedule and Room:**_____

Course Description

This course is designed for Economics students to provide them with a solid and working knowledge of pre-Calculus Algebra. The course tackles the real number system, basic algebraic operations on polynomials, algebraic fractions and radicals, functions and relations, different methods of solving equations, linear inequalities and system of linear equations.

Learning Outcomes

On completion of this course, the student is expected to present the following learning outcomes in line with the Expected Lasallian Graduate Attributes (ELGA)

ELGA	Learning Outcome
Critical and Creative Thinker Effective Communicator Lifelong Learner Service-Driven Citizen	At the end of the course, the students should be able to understand and explain the basic concepts of algebra.

Final Course Output

As evidence of attaining the above learning outcomes, the student is required to submit the following during the indicated dates of the term.

Learning Outcome	Required Output	Due Date
At the end of the course, the students should be able to understand and explain the basic concepts of algebra.	Prior to each quiz, a student must submit solutions to the assigned items.	On the day of the quiz

Rubric for assessment

The following rubric will be used for grading students' rewritten solutions. The new quiz score will be obtained by adding ORIGINAL QUIZ SCORE and 20% of the REWRITTEN SCORE. Note that students will only rewrite items that they did not get perfectly.

CRITERIA	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Content and Organization (50%)	In-depth and insightful discussion in addition to score 3 performance.	Logical sequencing of information throughout. Sufficient supporting details.	Logical sequencing of information most of the time. Details are given but inadequate to support the topic.	Information presented with little organization. Most of the details are irrelevant.
Knowledge of Topic(30%)	Concepts in Algebra are presented correctly. Mistakes are justified correctly.	A few concepts are incorrectly stated and some mistakes are not correctly justified.	Majority of the mistakes committed are not correctly justified.	No justification given.
Grammar (20%)	No error	Only one or two errors are committed.	Three or four errors are commited.	More than four errors are committed.

Additional Requirements

- Seatworks
- Quizzes (at least three)
- Boardwork
- Recitation

Grading System

	FOR EXEMPTED STUDENTS (w/out Final Exam)	FOR STUDENTS with FINAL EXAM	
		with no missed quizzes	*with one missed quiz*
Average of quizzes	95%	65%	55%
Seatwork, Board Work, Assignments	5%	5%	5%
Final exam	-	30 %	40%

Scale:

95-100%	4.0
89-94%	3.5
83-88%	3.0
78-82%	2.5
72-77%	2.0
66-71%	1.5
60-65%	1.0
<60%	0.0

Learning Plan

Learning Outcome	TOPICS	WEEK NO.	Learning Activities	
At the end of the course, the students should be able to understand and explain the basic concepts of algebra.	1-1 Set and Basic Notation 1-2 Subsets and Counting 1-3 Operations on Sets	Week 1	Seatwork Boardwork Lecture and Discussion Practice Exercises	
	2-1 The Algebra of Counting Numbers 2-2 Additive Inverses and Subtraction 2-3 Integers and Factorizations 2-4 Multiplicative Inverses and Division 2-5 Rational and Irrational Numbers	Week 2		
	3-1 Addition of Algebraic Expressions 3-2 Multiplication of Algebraic Expressions 3-3 Division of Algebraic Expressions 3-4 Special Products 3-5 Factors and Factoring	Week 3 - 4		
	3-6 Simplification of Fractions 3-7 Addition of Fractions 3-8 Multiplication and Division of Fractions 3-9 Integral and Zero Exponents 3-10 Rational Exponents 4-1 Order Axioms for Real Numbers 4-2 A One-dimensional Coordinate System 4-3 A Two-dimensional Coordinate System 4-4 The Distance Formula and the Slope Formula 4-5 The Circle 5-1 Functions and Relations 5-2 Graphical Representation of Functions and Relations	Week 5 – 8	Seatwork Boardwork Lecture and Discussion Practice Exercises	

	7-1 The Algebra of Complex Numbers	Week 9 - 13	Seatwork Boardwork Lecture and Discussion Practice Exercises	
	8-1 The Linear Functions 8-2 Arithmetic Progressions 8-3 The Quadratic Function 8-4 Solution of the Quadratic Equation 8-6 Relations Between Zeros and Coefficients of the 8-7 Equations in Quadratic Form 8-8 Equations Involving Radicals 8-10 Solution of Two Linear Equations 8-11 Algebraic Solutions of Three Linear Equations 8-12 Solution of One Linear and One Quadratic Equation			
	FINAL EXAMINATION	Week 14		

References

Modern College Algebra, (3rd edition) by Vance
College Algebra with Trigonometry, (7th edition) by R.A. Barnett, M.R. Ziegler and K.E. Byleen
College Algebra, (4th edition) by Fuller
College Algebra (10th edition) by P. Rees, F. Sparks and C. Rees
Algebra for College Students (4th edition) by Mark Dugopolsky
College Algebra and Trigonometry by L. Leithold
Succeeding with College Algebra by Jerome E. Kaufmann & Karen Schwitters (2010) Cengage Learing/Philmont Academic Solutions

Class Policies

1. The required minimum number of quizzes for a 3-unit course is 3, and 4 for 4-unit course. No part of the final exam may be considered as one quiz.
2. Cancellation of the lowest quiz is not allowed even if the number of quizzes exceeds the required minimum number of quizzes.
3. As a general policy, no special or make-up tests for missed exams other than the final examination will be given. However, a faculty member may give special exams for
   A. approved absences (where the student concerned officially represented the University at some function or activity).
   B. absences due to serious illness which require hospitalization, death in the family and other reasons which the faculty member deems meritorious.
4. If a student missed two (2) examinations, then he/she will be required to take a make up for the second missed examination.
5. If the student has no valid reason for missing an exam (for example, the student was not prepared to take the exam) then the student receives 0% for the missed quiz.
6. Students who get at least 89% in every quiz are exempted from taking the final examination. Their final grade will be based on the average of their quizzes and other prefinal course requirements. The final grade of exempted students who opt to take the final examination will be based on the prescribed computation of final grades inclusive of a final examination. Students who missed and/or took any special/make-up quiz will not be eligible for exemption.
7. Learning outputs are required and not optional to pass the course.
8. Mobile phones and other forms of communication devices should be on silent mode or turned off during class.
9. Students are expected to be attentive and exhibit the behavior of a mature and responsible individual during class. They are also expected to come to class on time and prepared.

10. Sleeping, bringing in food and drinks, and wearing a cap and sunglasses in class are not allowed.
11. Students who wish to go to the washroom must politely ask permission and, if given such, they should be back in class within 5 minutes. Only one student at a time may be allowed to leave the classroom for this purpose.
12. Students who are absent from the class for more than 5 meetings will get a final grade of 0.0 in the course.
13. Only students who are officially enrolled in the course are allowed to attend the class meetings.

Approved by:

Dr. Arturo Y. Pacificador, Jr.
Chair, Department of Mathematics