			2025/4/
Department	International College of Liberal Arts		
Semester	Fall 2025	Year Offered (Odd/Even/Every Year)	Every Year
Course Number	QREA102		
Course Title	College Algebra		
Prerequisites	None		
Course Instructor	JHINGAN Sanjay	Year Available (Grade Level)	1
Subject Area	Quantitative Reasoning & Natural Sciences	Number of Credits	3

(NOTE 1) Depending on the class size and the capacity of the facility, we may not be able to accommodate all students who wish to register for the course

Language of instruction

English

Class Style

Lecture

	This course provides a comprehensive foundation in essential mathematical concepts necessary for advanced coursework. No
	prior knowledge is required beyond elementary high school mathematics.
	The curriculum covers all topics found in a standard College Algebra course, including:
	 Sets and numbers Equations and inequalities
	3. Coordinates and graphs 4. Functions (notynomials rational functions logarithms exponentials etc.)
	5. Systems of equations 6. Introductions
Course Description	
	Based on student feedback from the previous offering of this course, regular in-class quizzes will be introduced. These quizzes will help students better assess their understanding and overall progress.
Class plan based on course	
evaluation from previous academic year	
	Not applicable.
Course related to the	
instructor's practical experience (Summary of	
experience)	
	Pu the and of this source, students should have committed basis methometical literoop and he able to:
	by the end of this course, students should have acquired basic mathematical fiteracy and be able to.
	 Solve algebraic equations and inequalities Plot the graph of a function Plot the graph of a function with functions (a graph of a function of functions) even and a second se
	involving trigonometric functions, polynomials, logarithms, exponentials, etc.)
	 Solve systems of linear equations Perform basic operations with matrices
	Additionally, students will be well-prepared to pursue more advanced courses, such as statistics, calculus, and other
Learning Goals	critical thinking abilities.
Class plan based on course evaluation from previous academic year Course related to the instructor's practical experience (Summary of experience) Learning Goals	Not applicable. By the end of this course, students should have acquired basic mathematical literacy and be able to: 1. Solve algebraic equations and inequalities 2. Plot the graph of a function 3. Perform algebraic simplifications with functions (e.g., factorization and simplification of functional expressions involving trigonometric functions, polynomials, logarithms, exponentials, etc.) 4. Solve systems of linear equations 5. Perform basic operations with matrices Additionally, students will be well-prepared to pursue more advanced courses, such as statistics, calculus, and other subjects requiring foundational quantitative skills. The course will emphasize developing quantitative reasoning and critical thinking abilities.

iCLA Diploma Policy	DP2
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iCLA Diploma Policy

(DP1) To Value Knowledge - Having high oral and written communication skills to be able to both comprehend and transfer knowledge

(DP2) To Be Able to Adapt to a Changing World - Having critical, creative, problem-solving, intercultural skills, global and independent mindset to adopt to a changing world

(DP3) To Believe in Collaboration - Having a disposition to work effectively and inclusively in teams

(DP4) To Act from a Sense of Personal and Social Responsibility - Having good ethical and moral values to make positive impacts in the world

	Prohlem-Rased Learning/Discussion Debate
Active Learning Methods	
More details/supplemental information on Active Learning Methods	Students will be evaluated through in-class quizzes that test their ability to apply lecture concepts to real-world problems. Active participation in class discussions, where students relate learned concepts to real-life situations, is highly encouraged.
Use of ICT	UNIPA for communication with instructor, accessing class materials, and tracking attendance.
Contents of class preparation and review	Students are encouraged to access class material on UNIPA, and prepare themselves before coming to lecture. Hours expected 2 hours to be spent preparing for class (hours per week) Hours expected 3 hours to be spent on class review (hours per week)
Feedback Methods	UNIPA, and Office 365 will be used for regular feedback to quizzes. Student can use office hours for discussion.

Grading Criteria		
Grading Methods	Grading Weights	Grading Content
In-class quizzes	100%	Seven quizzes will be conducted during the course.

Required Textbook(s)	Michael Sullivan: Algebra and Trigonometry, Pearson (all editions are ok) Robert Blitzer: College Algebra, Pearson (all editions are ok)
Other Reading Materials/URL	Any book on college algebra covering below mentioned topics is accepted for this course and students should feel free to choose any textbook they feel comfortable with. There are several books available online for free download. College Algebra, Jay Abramson (available for free download: https://openstax.org/details/books/college-algebra)
Plagiarism Policy	Plagiarism is the dishonest presentation of someone else's work as one's own. Submitting the same work for multiple assignments (duplicate submission) is also considered plagiarism. Depending on the severity, plagiarism may result in failing the assignment or the course. Repeated offenses will be reported to the University, which may impose further penalties.
Other Additional Notes (Outline crucial policies and info not mentioned above)	Students are not allowed to use mobile phones or laptops during lectures. However, digital note-taking devices are permitted.

(NOTE 2) Class schedule is subject to change

Class Schedule	
Class Number	Content
Class 1	Lecture 1 Prerequisites: Basic mathematics, Sets and Numbers.
Class 2	Lecture 2 Prerequisites: Algebra Essentials, Polynomials etc. Lecture 3
Class 3	Prerequisites: Review. In-class quiz 1.
Class 4	Lecture 4 Equations and Inequalities: Linear and Quadratic Equations.
Class 5	Lecture 5 Equations and Inequalities: Complex Numbers, Inequalities.
Class 6	Lecture 6 Equations and Inequalities: Review. In-class quiz 2.
Class 7	Lecture 7 Graphs: Connecting Algebra and Geometry.
Class 8	Lecture 8 Graphs: Lines and Circles.
Class 9	Lecture 9 Graphs: Review.
Class 10	Lecture 10 Functions and Graphs: How to Graph (properties).
Class 11	Lecture 11 Functions and Graphs: Graphing Techniques (transformations).
Class 12	Lecture 12 Functions and Graphs: Review. In-class quiz 3.
Class 13	Lecture 13 Linear and Quadratic Functions: : Linear Functions and Models.
Class 14	Lecture 14 Linear and Quadratic Functions: : Quadratic Functions and Models.
Class 15	Lecture 15 Linear and Quadratic Functions: Review. In-class quiz 4.
Class 16	Lecture 16 Polynomial and Rational Functions: Polynomial Functions and their graphs

	Lecture 17
Class 17	Polynomial and Rational Functions: Rational Functions and their graphs
	Lecture 18
Class 18	Polynomial and Rational Functions: Review.
	Lecture 19
Class 19	Transcendental functions: : Exponential and Logarithmic Functions
	Lecture 20
Class 20	Transcendental functions: : Financial Models, Growth and Decay models
	Lecture 21
Class 21	Transcendental functions: Review. In-class quiz 5.
	Lecture 22
Class 22	System of Equations: Matrices
	Lecture 23
Class 23	System of Equations: Determinants
	Lecture 24
Class 24	System of Equations: Matrix Algebra
	Lecture 25
Class 25	System of Equations: Review. In-class quiz 6.
	Lecture 26
Class 26	Introduction to Calculus: Limits
	Lecture 27
Class 27	Introduction to Calculus: Differentiation
	Lecture 28
Class 28	Introduction to Calculus: Integration
	Lecture 29
Class 29	Introduction to calculus: Partial Differentiation
Class 30	Lecture 30 Introduction to calculus: Review. In class quiz 7.