Algebra III

Text:	Lial, Hornsby & Schneider (1997) *College Algebra 7th edition,* Addison Wesley Educational Publishers: NewYork.

Supplemental Materials:	TI-83 or-84 graphing calculator

Course Description:	The purpose of this course is to further develop the skill and concepts of Algebra II as well as prepare the student for college level mathematics. It will reinforce the students' comprehension of algebraic skill and concepts, while developing an understanding of functions and relations, their graphs and their applications using numeric, graphic, and analytical approaches.

Methods of Evaluation:	Students can be evaluated through tests, quizzes, daily practice sets, homework problem sets, quarterly exams, semester exams and/or any other form of evaluation instrument the instructor finds applicable to the course.

Pace of Instruction:	First Semester: Chapters 1-4 Second Semester: Chapters 5-8

Course Objectives:	At the end of this course students should be able to recognize and work with the following: 1. Real number, order and absolute value 2. Polynomials and the binomial theorem 3. Factor polynomials 4. Solve rational equations 5. Evaluate rational exponents 6. Radicals 7. Complex numbers 8. Solve linear equations and their applications 9. Solve quadratic equations and their applications 10. Solve inequalities 11. Solve variation problems 12. Solve absolute value equations and inequalities 13. Relations and the rectangular coordinate system 14. Functions and linear functions 15. Equations of a line 16. Graphing relations and functions 17. Other general graphing techniques 18. Quadratic functions 19. Synthetic division 20. Zeroes of polynomial functions 21. Graphs of polynomial functions

	22. Rational functions 23. Inverse functions 24. Exponential functions 25. Logarithmic functions 26. Evaluate logs and change-of-base 27. Solve exponential and logarithmic equations 28. Solve exponential growth and decay problems 29. Solve linear and non-linear systems 30. Matrix solutions of linear systems 31. Properties of matrices 32. Determinants 33. Cramer's rule 34. Matrix inverses 35. Systems of inequalities and linear programming 36. Parabolas 37. Ellipses 38. Hyperbolas 39. Conic sections 40. Arithmetic sequences and series 41. Geometric sequences and series 42. Basics of probability