

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: ~~ALGB085~~ **ALGB-080** Department: Mathematics

Course Title: Extended Algb I Semester: Sp Year: 2011

Course Objective	Competencies
<ol style="list-style-type: none"> 1. Solve applied problems, which involve the operations of addition, subtraction, multiplication and division with fractions. 2. Convert fraction to decimal notation. 3. Solve applied problems, which involve decimal notation. 4. Solve conversions using unit analysis. 5. Evaluate variable expressions. 6. Translate phrases to algebraic expressions. 7. Find the absolute value of a number. 8. Evaluate expressions involving addition, subtraction, multiplication and division of signed numbers. 9. Simplify numeric expressions. 10. Find the reciprocal of a number. 11. Combine like terms. 12. Apply distributive law to expand a product. 13. Simplify expressions involving grouping symbols. 14. Apply order of operations to evaluate an expression. 20. Solve linear equations. 22. Solve number word problems. 23. Find percent of a number. 24. Solve applied problems, which involve percent. 25. Solve formula equation. 26. Solve linear inequalities. 27. Graph number line inequality. 28. Locate the quadrant for a given point. 29. Find intercepts given an equation. 30. Find intercepts given a graph. 31. Given an equation plot its graph. 32. Given a horizontal or vertical line graph, determine the equation. 33. Find the slope of the line through 2 points. 	

Course Objective	Competencies
34. Find the slope given the equation of the line. 35. Find the equation of the line given a point and the slope. 36. Find the equation of the line through 2 given points. 37. Identify parallel and perpendicular lines given the equations of 2 lines. 38. Plot the graph of a linear inequality. 39. Determine whether paired lines are the same, parallel, or intersecting at one point. 40. Solve a system of equations by the substitution and the elimination method. 41. Solve applied problems involving systems of equations. 42. Evaluate exponential expressions. 43. Express a number in scientific notation. 44. Apply exponent laws to simplify an expression. 45. Add and subtract polynomials. 46. Multiply polynomials. 47. Evaluate polynomials involving more than one variable. 48. Collect like terms for expressions involving more than one variable. 49. Multiply binomials for expressions involving more than one variable. 50. Divide a polynomial by a monomial.	