**LSU College Readiness Program**

 **COURSE PROFILE**

**2-17-2017**

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| **COURSE NAME** | **CLEP Prep Course** |
| **PRIMARY ONLINE CONTENT SOURCE** | ***Algebra and Trigonometry, 2e,* *MyMathLab***Kirk Trigsted |
| **COURSE/UNIT CREDIT** | **1 Carnegie Unit** |
| **GRADE(S)** | **10, 11, or 12** |
| **PREREQUISITE(S)** | **Successful Completion of Algebra II** |

**CLEP PREP COURSE**

**SECTION NAMES (NUMBER OF EXERCISES) AND LEARNING OBJECTIVES**

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| **CLEP 1: Factoring and Expanding Polynomials (38)**Multiply polynomialsFactor out a greatest common factorFactor by groupingFactor trinomials with a leading coefficient equal to oneFactor using special factoring formulas |
| **CLEP 2: Operations with Algebraic Expressions (13)**Use the order of operations to simplify numeric and algebraic expressions |
| **CLEP 3: Operations with Exponents (52)**Simplify exponential expressions involving integer exponentsSimplify radical expressionsSimplify exponential expressions involving rational exponents |
| **CLEP 4: Quadratic Inequalities (16)**Solve polynomial inequalities |
| **CLEP 5: Systems of Non-linear Equations (16)**Determine the number of solutions to a system of nonlinear equationsSolve systems of nonlinear equations using substitution, elimination, or graphingSolve applied problems using systems of nonlinear equations |
| **CLEP 6: Inequalities in Two Variables (18)**Determine whether ordered pairs are solutions to inequalities in two variablesGraph linear inequalities in two variables |
| **CLEP 7: Systems of Inequalities in Two Variables (21)**Determine if ordered pairs are solutions to systems of inequalities in two variablesGraph systems of linear inequalities in two variables |
| **CLEP 8: Algebra of Functions (25)**Evaluate a combined functionFind combined functions and their domains |
| **CLEP 9: Real Numbers (12)**Understand and classify real numbersUnderstand absolute value and use it to find distance |
| **CLEP 10: Complex Numbers (37)**Simplify powers of *i*Add and subtract complex numbersMultiply complex numbersFind the quotient of complex numbersSimplify radicals with negative radicandsSolve quadratic equations using the quadratic formula |
| **CLEP 11: Sequences and Series (42)**Write the terms of a sequenceWrite the terms of a recursive sequenceWrite a formula for the general terms of a sequenceCompute partial sums of a seriesDetermine the sums of a finite series written in summation notationWrite a series using summation notationSolve applications involving sequences and series |
| **CLEP 12: Arithmetic Sequences and Series (35)**Determine if a sequence is arithmeticFind the general term of an arithmetic sequenceFind a specific term of an arithmetic sequenceCompute the nth partial sum of an arithmetic seriesSolve applications of arithmetic sequences and series |
| **CLEP 13: Geometric Sequences and Series (38)**Write the terms of a geometric sequenceDetermine whether a sequence is geometric and find its common ratioFind the general term of a geometric sequenceFind a specific term of a geometric sequenceCompute the nth partial sum of a geometric seriesDetermine if an infinite geometric series converges or diverges and find its sumSolve applications of geometric sequences and series |
| **CLEP 14: Binomial Theorem (25)**Expand binomials raised to a power using Pascal's triangleEvaluate binomial coefficientsExpand binomials raised to a power using the Binomial TheoremFind a particular term of a binomial expansionFind a particular coefficient of a binomial expansion |
| **CLEP 15: Determinants of 2 by 2 Matrices (14)**Determine the size of matrices and their typesEvaluate second-order determinantsEvaluate determinants of 2x2 matricesSolve equations involving determinantsWrite systems of linear equations given determinants and solve equations |