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| **MATH 71 OUTLINE** |
| INTERMEDIATE ALGEBRA - 5 Unit Course |
| TEXT: Intermediate Algebra, 5th Edition, Miller, O'Neill, Hyde |
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| **Approved: 11/15/19** | **Effective:**  | **Spring 2020** |
| **MATERIAL TO BE COVERED** | **CHAPTERS FROM TEXT** | **TIME LINE** |
| Sets of numbers and interval notation, operations on real numbers, algebraic expressions and properties of real numbers. | R.2 - R.4 | 3.5 hours |
| Linear equations, formulas, applications, linear and compound inequalities, absolute value equations and inequalities | 1.1 - 1.7 | 6 Hours |
| Linear equations in two variables, slope of a line, applications of linear equations, writing equations of lines, functions, graphs of functions | 2.1 - 2.7 | 6 Hours |
| Systems of linear equations in two and three variables, applications of linear systems, systems of linear inequalities in two variables. | 3.1 - 3.7 | 5 Hours |
| **Chapters R, 1-3 should be completed by the end of Week Five** |   |   |
| Exponents, add, subtract, multiply, and divide polynomials and polynomial functions. Factoring, solving quadratic equations by factoring, applications. OPTIONAL: synthetic division.  | 4.1 - 4.8 | 6 Hours |
| Rational expressions and functions, simplify, multiply, divide, add, subtract, complex fractions, rational equations, applications | 5.1 -.5.7 | 6 Hours |
| Rational exponents, add, subtract, multiply, divide, and simplify radical expressions and functions, radical equations, complex numbers. | 6.1 - 6.8 | 7 Hours |
| Square root property, completing the square, quadratic formula, equations quadratic in form, graphs of quadratic functions and other parabolas, quadratic and rational inequalities | 7.1 - 7.6 | 8.5 Hours |
| Algebra of functions, composite and inverse functions, exponential functions, logarithmic functions, logarithmic properties, e and change of base, exponential and logarithmic equations and applications | 8.1 - 8.7 | 8.5 Hours |
| Distance and Midpoint formulas, circle, parabola, ellipse, hyperbola, identifying conics, systems of nonlinear equations. | 9.1 - 9.4 | 6 Hours |
| Sequences and summation notation, Binomial expansion | 10.1 - 10.2 | 2.5 Hours |
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| \*\*\* One hour = 1 hour of face time. \*\*\*\*This outline allows for 5 hours of exams. |  |
|  16 Week Term: 1 week = 4.6667 hours (face time) 6 Week Term: 1 week = 12.5 hours (face time) |
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| To access the Department Policy, visit <https://www.mtsac.edu/math/departmentpolicy.html>  |  |
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| Submitted by: Troxell, McMullin |  |  |