*Approved: MAY 2021 Effective: FALL 2021*

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| **MATERIAL TO BE COVERED** | **SECTIONS**  **FROM TEXT** | **TIME LINE** |
| Applications of linear equations, quadratic equations and applications, radical, rational and quadratic-in-form equations, linear/rational/quadratic inequalities. (Optional: complex numbers.) | 1.2 and 1.4 - 1.7  (treat as review) Optional: 1.3 | 4 Hours |
| Graphs of equations including circles, functions, linear functions, graphs of basic functions and piecewise-defined functions, graphing techniques, function operations including composition. | 2.1 - 2.8 | 10 Hours |
| Quadratic functions and applications, synthetic division, real and complex zeros of polynomial functions, polynomial functions: graphs and applications; rational functions: graphs and applications; variation. | 3.1 - 3.5, 3.7 | 14 Hours |
| Inverse functions, exponential functions, logarithmic functions, properties of logarithms, exponential and logarithmic equations and applications. | 4.1 - 4.6 | 10 Hours |
| Linear systems: two and three variables and applications, Matrix solution of linear systems, systems of linear inequalities and linear programming, properties of matrices. | 5.1 & 5.2 & 5.6 &  5.7 | 7 Hours |
| Sequences and series, arithmetic and geometric sequences and  series, binomial theorem, math induction. | 7.1 - 7.5 | 7 Hours |

### 4-unit class: hours total 57.5 (15 x 3 hours 50 minutes) – hours for exams + 2.5 hour final

This outline allows for 4 hours of exams.

It is highly recommended that the instructor assign the summary exercises found

in the middle of each chapter.

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Math Department Policy can be found at: <https://www.mtsac.edu/math/departmentpolicy.html>