J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: <u>MTH 162</u>   Credits: <u>3</u>

Conics
- x Identify the conic sections of the form: $Ax^2 + By^2 + D_x + Ey + F = 0$
  $Ax^2 + By^2 + D_x + Ey + F = 0$.
- x Write the equations of circles, parabolas, ellipses, and hyperbolas in standard form centered both at the origin and not at the origin.
- x Identify essential characteristics unique to each conic.
- x Graph equations in conic sections, centered both at the origin and not at the origin.
- x Solve applications involving conic sections.

Sequences and Series (Optional unit at the discretion of the department.)
- x Identify the terms of geometric sequences.
- x Find a particular term of geometric sequence.
- x Determine the formula for the a_n term of geometric sequences.
- x Find the sum of first n terms of finite geometric series.
- x Find the sum of infinite geometric series.
- x Introduce arithmetic concepts as time allows.

Major Topics to be Included

- x Trigonometric Functions
- x Analytic Trigonometry
- x Applications of Trigonometry
- x Conics

Effective Date/Updated: December 2021