



MONROE COUNTY
COMMUNITY COLLEGE

Course Outcome Summary

Standard Course

Math 273 Introduction to Differential Equations

Course Information

Division	Science/Mathematics
Contact Hours	45
Total Credits	3

Prerequisites A grade of C or better in Math 172 Calculus II

Course Description

Topics include: First-order equations: solution methods, existence, uniqueness, and numerical techniques, Second order equations: constant coefficients, reduction of order, Laplace transform, series, variation of parameters, Systems of equations: eigenvectors and eigenvalues, fundamental matrix solutions, equilibrium points, qualitative behavior, phase plane diagrams, applications of differential equations to scientific, engineering and economic problems.

Course Outcomes

In order to evidence success in this course, students will be able to:

1. Solve separable, exact, first-order differential equations and find integrating factors when possible.
2. Solve constant coefficient, variable coefficient, and non-homogeneous second-order differential equations.
3. Be able to solve appropriate differential equations using Laplace transform methods.
4. Be able to solve appropriate differential equations using power series methods.
5. Be able to make and analyze phase plane diagrams for differential equations and systems of differential equations (both linear and autonomous nonlinear).
6. Be able to linearize nonlinear autonomous nonlinear systems of equations.
7. Be able to solve appropriate systems of differential equations using eigenvalue and eigenvector methods.

Date Updated: 09/05/2019
By:MN