OMT020 - ELEMENTARY DIFFERENTIAL EQUATIONS
3-4 Semester Hours/4-5 Quarter Hours

the listed nonessential learning outcomes. These optional topics should be included only if there is adequate course time to do so beyond giving primary course attention to the essential learning outcomes. At least 70% of the classroom instructional time has to be spent on the essential learning outcomes. The optional learning outcomes are learning experiences that enhance, reinforce, enrich or are further applications of the essential learning outcomes. If review of prerequisite course content is necessary, only a minimal amount of time should be devoted to such review .

The successful Elementary Di erential Equations student should be able to:

1. Solve first-order di erential equations that are separable, linear or exact. *
2. Solve first-order di erential equations by making the appropriate substitutions, including homogeneous and Bernoulli equations.*
3. Use linear or nonlinear first-order di erential equations to solve application problems such as exponential growth and decay, population logistics growth, velocity, solution mixtures, two component series circuits and chemical reactions.*

13. Solve special classes of equations such as Cauchy-Euler, Bessel and Legendre equations.

14. Perform operations with Laplace and inverse Laplace transforms to solve higher-order di erential equations.*

15. Solve systems of di erential equations.