



Applied Mathematics 311

Differential Equations I

Classification of ordinary differential equations, first and second order equations with applications, series solutions about regular points and singular points, special functions, Laplace transform.
Course Hours: H(3-1T)

Prerequisite(s): [Mathematics 253](#) or 263 or [283](#) or [Applied Mathematics 219](#).

Antirequisite(s): Credit for both [Applied Mathematics 307](#) and [311](#) will not be allowed.

Syllabus

Topics

**Number
of hours**

Classification of differential equations, definition of solutions, explanation of existence and uniqueness theorems (without proofs)

2

Solutions of first-order equations with applications

9

Solutions of second-order equations with applications

8

Series solutions including singular points, and special functions

8

Laplace transforms

6

Systems of equations

3

TOTAL

 36

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2001:08:21
Prerequisite change made 03:07:02
Prerequisite change made 08:07:01
LPB.jlong