



APPLIED MATHEMATICS 311

"DIFFERENTIAL EQUATIONS I"

Calendar Description: H(3-1T)

Classification of ordinary differential equations, first and second order equations with applications, series solutions about regular points and singular points, special functions. Laplace transform.

Prerequisite: Mathematics 253 or 263 or Applied Mathematics 219.

Note: Note: Credit for more than one of Applied Mathematics 307 and Applied Mathematics 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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