

(3-0-1; —)

Mathematics of Engineering Systems I

MATH-334*

This course is a core course in the third year of Mathematics and Engineering. Students learn fundamental techniques in applied mathematics.

Textbook: *Modern Signals and Systems*
by Kwakernaak

Prerequisite: MATH-226* or 231* or 237* and 227* or 280* or 281*;
or permission of the instructor.

Instructor: R. Hirschorn

Evaluation: Homework 25%
Final Examination 75%

Outline:

1. Orthonormal families, Fourier series and convergence
2. Signal spaces, Fourier transforms and generalized functions
3. Solution of boundary value problems, including heat, wave and potential equations
4. Applications to mechanical, electrical and thermal systems