

Mathematics of Engineering Systems II

Course Information

This course is the second in the mathematics and engineering curriculum on the fundamentals of signals and systems theory and its practical use in signal processing, communications and control.

Instructor:	Serdar Yüksel, Jeffrey Hall 415, Phone: 533-2429, E-mail: yuksel@mast.queensu.ca
Marker and TA:	TBA
Office Hours:	Mondays 10:35-12:30, else by appointment
Text:	<i>Modern Signals and Systems</i> , by H. Kwakernaak and R. Sivan, (Copies of this book are available at the Queen's Bookstore) Supplemental Notes will be posted on the course web site
References:	Math 334 Lecture Notes by Andrew D. Lewis <i>Signals and Systems</i> , A. V. Oppenheim, A. S. Willsky and S. Nawab
Announcements:	Visit http://www.mast.queensu.ca/~math335 regularly for announcements, homeworks etc.
Grading:	Homework Assignments 15%; Mid-terms I and II 20% each, Final 45%, Tentative dates for Midterms : February 11th, March 10th

Topics

- Signals and Transformations
- Normed Spaces, Hilbert Spaces
- Projection Theorem and Orthogonal Sequences
- Distributions as Applied to Engineering Systems
- Systems
- Fourier, z and Laplace Transforms
- Applications in Signal Processing: Estimation, Sampling Theorem and Digital Filtering
- Applications in Communications: Modulation, Multiplexing and Information Transmission
- Applications in Automatic Control: Feedback and Stability