Course Objectives: To build upon foundational knowledge of basic discrete-time signals and systems and digital signal processing (DSP); to extend this foundational knowledge to the study of DSP design methods and applications; to illustrate the application of DSP across various areas of engineering and science, and to provide experience in the design of DSP systems.

Instructor:
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Course website: http://www.engr.mun.ca/~cmoloney/dsp10/8821.html

Regular Classes:
- Mondays 1-1:50pm
- Tuesdays 1-1:50pm
- Thursdays 1-1:50pm

Extra Hour:
- Thursdays 12:00-12:50pm
Although listed in the schedule as a tutorial hour, this extra hour is mainly intended to allow for make-up classes as may be necessary during the term. The extra hour can also be used for occasional tutorials prior to tests and assignment due dates, as appropriate.

Course Topics: The Engr 8821 course material is structured into modules, each with its particular topic. The course modules will address the following topics:
1. Introduction/Review to Digital Signal Processing (DSP)
2. DSP as the DT Processing of CT Signals
3. Transform Analysis of LTI Systems
4. Some Interesting Aspects of Phase
5. FIR Filter Design
6. IIR Filter Design
7. Computable Transforms
8. Fourier Analysis of DT Signals (and of CT Signals via Sampling)


Software: In this course, we will be using Matlab to analyze and design DSP systems. Matlab 7 (R14) is available on the MUN Engineering network. Tutorials to review Matlab’s basic
functionality, and notes to get you started with its Signal Processing toolbox, will be indicated on
the course website.

Some Reference Texts:

On Discrete-time Systems and Signals
   Hall, 1997.

On DSP
   2006 (or 2nd ed. 2001).

On Matlab for DSP: