

# EECS 844: Adaptive Signal Processing

## Syllabus

**Class Hours:** Tuesday, Thursday, 8:00-9:15 in 2112 Learned Hall

**Instructor:** Dr. Shannon D. Blunt  
3034 Eaton Hall  
357 Nichols Hall (4-7326)  
e-mail: [sdblunt@ku.edu](mailto:sdblunt@ku.edu)

**Office Hours:** Tuesday, Thursday, 9:15-10:30 or by appointment

**Text:** *Adaptive Filter Theory, 5<sup>th</sup> Ed.*, Simon Haykin  
*Digital Signal Processing*, John Proakis and Dimitris Manolakis (supplemental)

**Grading:** Standard plus/minus grading will be used for this course.

Four take-home exams, roughly equally weighted. Exams will have multiple parts and you will be required to sign a statement that you have completed each by yourself. Two weeks will be provided to complete each exam, which will be turned in by the due date or no credit will be given.

Separately, all associated Matlab programs (in executable \*.m format) will be emailed to the instructor by the same due date.

**Matlab:** Most problems on the exams will require the use of Matlab.  
For those not familiar with Matlab, a short introduction can be found at  
[www.ittc.ku.edu/~sdblunt/844/MATLAB.html](http://www.ittc.ku.edu/~sdblunt/844/MATLAB.html)

**Course Website:**  
[www.ittc.ku.edu/~sdblunt/844/EECS844.html](http://www.ittc.ku.edu/~sdblunt/844/EECS844.html)

### General Course Topics:

Weiner Filters  
Interference Cancellation  
Linear Prediction  
Spectral Estimation  
Recursive Adaptive Filters  
Array/Multichannel Signal Processing

The course will also cover several important mathematical structures, operations, and decompositions that are useful for signal processing.

**Additional Notes:**  
[Array Processing primer](#)