Math 582D, Winter 2017

MWF 10:30-11:20

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Course description. This is the second quarter in Advanced Linear Algebra, introducing topics that delve more into theoretical issues of implementation and floating-point arithmetic. Topics will include:

1. Perturbation Theory (eigenvalues and condition numbers, pseudo-spectrum)
2. Solving linear systems (issues of stability and accuracy; conjugate gradient, Krylov spaces, and Arnoldi iterations; preconditioning)
3. Tensors and Kronecker products

Prerequisites. Undergraduate linear algebra.