ASEN5307   E   D   A   M   - F   2018

Instructor	Dr. R. Steven Nerem (Office: ECNT319, Ph. 492-6721, Email: nerem@colorado.edu)
Class Time	TTh 8:00 am – 9:15 pm
Class Location	ECCR 105
Class Web Page	http://canvas.colorado.edu
Office Hours	10-11 TTH, or anytime door is open, or by email

Class Assistant

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I. Introduction
     1.   Collecting Data
     2.   Data Calibration and Interpolation
     3.   Data Editing
     4.   Presenting Data

II.   Statistics and Error Handling
     1. Uncertainties in Measurements
     2. Empirical Distributions
     3. Theoretical Distributions

     4. t-test, F-test, $!2$ test
     5. Confidence Intervals
     6. Correlation Coefficient
     7. Degrees of Freedom
     8. Estimation Methods
     9. Curve Fitting
     10.Covariance and Error Analysis
     11.Residual Analysis and Data Editing
     12.Linear Regression Analysis
     13.Bootstrap and Jackknife Estimates

III. Time-Series Analysis
     1. Fourier Analysis
     2. Harmonic Analysis
     3. Blackman-Tukey Spectral Analysis
     4. Cross-Spectral Analysis
     5. Wavelet Analysis
     6. Analyzing Unevenly Spaced Data
     7. Lomb-Scargle Powerspectrum

IV. Signal Processing
    1.

Syllabus Statements

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the acad