Calendar Course Description PHYS 420 (3) Data and Image Processing Introduction to digital signal and image processing. Correlation, convolution, Fourier transforms, digital filtering, model of image formation and degradation, image filtering in the spatial and Fourier domain, deconvolution, multivariate analysis. [3-0-0]. Prerequisite: All of MATH 225, MATH 317 and 3 credits in 200-level Physics. Topics include Intro Matlab; Systems and sampling; Correlation; Time Series; Fourier Theory I; Fourier Theory II; Fourier Theory III; Filtering I; Filtering II; Filtering III; Filtering IV; Image processing I; Image processing II; Multivariate analysis I; Multivariate analysis II.