ELC XXX - Digital Video Processing and Compression

An introduction to digital video processing and compression. Begins with the basics of human vision and color theory and digital image representations. Introduces linear and non-linear image filtering. Covers the fundamentals of compression – entropy, quantization, rate-distortion tradeoff, Huffman coding and arithmetic coding. Culminates with lossless and lossy still image compression based on discrete cosine transform, and video compression based on motion compensated prediction.