CAP5400 – Digital Image Processing
http://aivi.cse.usf.edu/~goldgof/CAP5400.html (also CANVAS)

The purpose of this course is to give a practical introduction to a range of fundamental image processing algorithms. Prerequisite for this class is graduate standing, mathematics and algorithm background and experience in C/C++ programming (or MATLAB for students outside the department).

- Image manipulation and smoothing
- Histogram modification and thresholding
- Color image processing
- Edge detection
- Fourier transform and image filtering
- Hough transform
- Feature extraction, boundary/region representation
- Image formation, geometric optics
- Basic video processing
- Image Acquisition Labs

The text is the book by Milan Sonka et al, "Image Processing, Analysis and Machine Vision", Thomson, 2015 (forth edition) a comprehensive reference text covering a lot of topics. We will use it as well as handouts and class notes.

- Time: 12:30-1:45pm, Monday and Wednesday
- Room: NES 108
- Instructor: Dmitry B. Goldgof, office: ENB 326