

EECS 207  
Spring 2021

Lecture 4

# Reading Assignments

- By Thurs. Jan. 21:
  - Chap. 1: Introduction
  - Chap. 2: Digital Image Fundamentals
  - Chap. 4: Filtering in the Frequency Domain
    - Section 4.1: Background
    - Section 4.2: Preliminary Concepts
    - Section 4.3: Sampling and the Fourier Transform of Sampled Functions
    - Section 4.4: The Discrete Fourier Transform of One Variable
- By Tues. Feb. 2:
  - Section 4.5: Extensions to Functions of Two Variables.
  - Section 4.6: Some Properties of the 2-D DFT and IDFT

Questions?

# Today

- What is an image?
- Chap. 4: Filtering in the Frequency Domain
  - Motivation for signal processing/Fourier analysis.
  - Preliminary concepts:
    - Fourier series.
    - Impulses and sifting.
    - Fourier transform of continuous functions in 1D.
    - Convolution of continuous functions in 1D.