NEPR 208, Introduction to Computational Neuroscience
1st Year Neuroscience Core, 2021

April 19 - May 7, M W F 9:15 am – 11:05 am Lectures are in virtual limbo

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This module will introduce students to computational and theoretical approaches in neuroscience. Emphasis will be on specific questions and how those questions can be answered with computational methods.

Monday and Wednesday classes will be lectures on Friday students will work on and discuss problems sets.

Website: https://druckmann-lab.github.io/nepr208

Week 1, April 19 – 23

April 19. Introduction and the Perceptron model (Druckmann)
April 21. Neural oscillations, computational approaches and insights (Huguenard)
April 23. Work on Problem set 1 in class.

Week 2, April 26 – April 30

April 26. Analysis of single neuron encoding (Druckmann)
April 28. Analysis of population activity (Druckmann).
April 30. Work on Problem set 2 in class.

Week 3, May 3 - 7

May 3. Adaptation and synaptic plasticity (Baccus)
May 5. The Hopfield model of context dependent memory (Druckmann)
May 7. Work on Problem set 3 in class.