Syllabus: Techniques in Computational Neuroscience 2019

	Wednesday Lectures		Friday Lectures	Friday Labs
Week	**Date**	**Title and content**	**Title and content**	**Lab topic and reports (bold)**
1	Apr 3	Course mechanics. Introduction to Comp. Neuro. Includes types of neurons/models.	Introduction to IGOR	Introduction to IGOR
2	Apr 10	Introduction to programming. Basics. Simple computations. Flow control. Functions.	Introduction to programming (cont)	**Introduction to Programming**
3	Apr 17	Introduction to modeling the nervous system, and early examples (perceptrons)	Report template & grading	**Perceptrons**
4	Apr 24	Hopfield networks		**Hopfield networks**
5	May 1	Stochastic neurons: Boltzmann networks		**Stochastic neurons: Boltzmann networks**
6	May 8	MIDTERM EXAM	Backpropagation	**Backpropagation**
7	May 15	Dynamical models and differential equations	Numerical integration of differential equations	**Dynamical neurons**
8	May 22	Integrate and fire neurons		**Integrate and fire neurons**
9	May 29	Simplified Hodgkin-Huxley models		**Simplified Hodgkin-Huxley models**
10	Jun 5	Machine learning		**Simulated annealing**