



שם הקורס

Methods in Neurophysiology

מרצה

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סמסטר

second

דרישות הקורס

הרכב הציון הסופי

60% exam, 20% presentation, 20% written work

מבנה הקורס

נושא השיעור ותכני השיעור (מטלות, רשימת קריאה, משימות וכיו"ב)	תאריך / מס' שיעור
Gene delivery and molecular approaches to manipulate protein expression level in the brain	
Detection of protein-protein interactions in the nervous system.	
Single-molecule mechanical methods in the study of synaptic vesicle fusion and beyond	
Measuring neuronal excitability <i>in vitro</i> and <i>ex vivo</i> methods	
Basics and principle of microscopy: single and two photon Optical recording and manipulation of brain activity in head-fixed rodents: <i>in vivo</i> calcium imaging, voltage sensitive dyes, chemo- and opto-genetics	
Super-resolution and TIRF microscopy	
Advanced <i>in vitro</i> systems in neuroscience	
Synaptic transmission from a protein structure point of view	
Large scale extracellular recordings from neural circuits	
Analysis of large scale extracellular recordings	
Students presentation	
Students presentation	
Students presentation	

קריאת חובה



קריאת רשות

הערות

Each student will choose a paper from a list of topics that will be provided and will have a) to summarize and submit a written summary the concept and details of the new technique compared to the classic one, what is the advantage, and what experiments were done to prove the advantages and b) present it in 10-15 min presentation in front of the group.