



שם הקורס

The hippocampus, the amygdala, and memory encoding in the mammalian brain

מרצה

רוני כהן

סמסטר

א

דרישות הקורס

הרכב הציון הסופי

Final exam (virtual) – 100%

מבנה הקורס

נושא השיעור ותכני השיעור (מטלות, רשימת קריאה, משימות וכיו"ב)	תאריך / מס' שיעור
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2. The Hippocampal Formation a. Subdivision of the parahippocampal region b. The entorhinal cortex c. The subicular complex d. Major fiber bundles	2
3. Hippocampus – Anatomy a. Location and position b. The trilaminar organization c. Sub-regions & cell types d. Cytoarchitectonics	3
4. Hippocampus – Circuitry a. The trisynaptic loop b. 3D connectivity	4
5. Hippocampus – Synapses	5



<ul style="list-style-type: none"> a. <i>In-vitro</i> electrophysiological recording techniques b. Synaptic plasticity in CA1 and CA3 sub-regions 	
<p>6. Hippocampus – Behavioral Correlates</p> <ul style="list-style-type: none"> a. <i>In-vivo</i> electrophysiological recording techniques b. Theta oscillations c. Spatially tuned cells 	6
<p>1. Hippocampus – Behavioral Correlates & Functional Theories</p> <ul style="list-style-type: none"> a. Mapping of abstract dimensions b. Phase precession c. Memory theories d. Cognitive map theory 	7
<p>7. Hippocampus – Functional Theories</p> <ul style="list-style-type: none"> a. Interplay between grid and place cells b. Adult-neurogenesis: pattern separation; pattern completion; and cognitive flexibility c. Hippocampal replay & preplay 	8
<p>8. Amygdala – The Limbic System & Anatomy</p> <ul style="list-style-type: none"> a. The limbic system b. Location and position c. Amygdalar nuclei and complexes d. Amygdalar cytoarchitectonics. 	9
<p>9. Amygdala – Circuitry</p> <ul style="list-style-type: none"> a. Afferent and efferent connections. b. Intra-amygdalar circuitry c. Hippocampal projections to the amygdala 	10
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<p>11. Amygdala – Beyond Fear</p> <ul style="list-style-type: none"> e. Anxiety f. Addiction 	12



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