

Synaptogenesis

Tentative Syllabus (April 5 Version)

September 8

Organizational meeting. Fact-finding about synapse diversity across brain regions
Graded homework, due Sept 15

September 15 & 22

Cellular Mechanisms: transport of presynaptic proteins

September 29 & Oct 6

Cellular mechanisms: transport of postsynaptic proteins

October 13

Conversion of axo-dendritic contacts into stabilized synapses

October 20

Synapse Maturation

October 27 & Nov 3

Molecular Mechanisms: Trans-synaptic synaptogenic adhesion molecules

November 10 & 17

Molecular mechanisms: Secreted molecules – neurotrophic factors and their receptors

November 24

Thanksgiving – no class

You may submit a rough draft of a paper

Dec 1

Synapse limiting molecules & Synaptogenesis in adulthood

Dec 8

Debate – hierarchy of mechanisms

Dec 13

No class - Term paper due Dec 15

Class structure

There will be weekly reading assignments, drawn from peer-reviewed journals in the field of neuroscience.

There will be weekly 5-min quizzes, designed to assess whether you have read the material and whether you comprehend the major points made in those reading material.

You will be required to write a paper, and to participate actively in class.

Your grade will be based on class participation, quiz scores, graded homeworks and quality of the paper. The paper will count towards 50% of the final grade. If you want feedback on a rough draft of a paper, that rough draft is due November 24th.