Neuroscience 804 - Developmental Neurobiology  Fall 2011

Tues & Thurs 9:30-11am in Giltner 101, 3 units.
Instructor: Marc Breedlove, 355-1749, breedsm@msu.edu

A review of the basic principles of molecular biology and the application of those principles to the development of the nervous system.


APPROXIMATE schedule:

Thu Sep 01  Introduction. Neuroscience of epistemology.
M Sep 05  LABOR DAY, no classes.
Tu 06  Induction, cell-cell interactions, regulation  Ch 1
Th 08
Tu 13  Cell differentiation and body patterns, homeotic genes  Ch 2
Th 15
Tu 20  Neurogenesis and cell migration  Ch 3
Th 22
Tu 27  Cell fate and determination  Ch 4
Th 29
Tu Oct 04  Axonal pathfinding and adhesion molecules  Ch 5
Th 06
Tu 11  Student presentations of primary reports, part 1.
Th 13  MIDTERM over chapters 1-5 only
Tu 18  Topographic mapping and synapse rearrangement  Ch 6
Th 20
Tu 25  Apoptosis and neurotrophic factors  Ch 7
Th 27
Tu Nov 01  Synapse formation and functionality  Ch 8
Th 03
Tu 08  Modulation of synaptic function, LTP  Ch 9
Th 10
Tu 15  Society for Neurosciences meeting, no classes
Th 17  “
Tu 22  Thanksgiving holiday, no classes.
Th 24  “
Tu 29  Development of behavior  Ch 10
Th Dec 01
Tu 06  Student presentations of primary reports, part 2.
Th 08

FINAL EXAM  TTBA, RTBA.

There will be one midterm (over chapters 1-5) and a final exam (over chapters 6-10) of approximately equal length and value. Each student will also be evaluated for two presentations in class describing a paper related to developmental neurobiology, and generating class discussion of the paper.