Neuroscience 804 - Developmental Neurobiology

Tues & Thurs 9:30-11am in Giltner room 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 Aug 29

M Sep 2 LABOR DAY, no classes.

Tu Sep 3 Induction, cell-cell interactions, regulation Ch 1
Sep 10 Cell differentiation and body patterns, homeotic genes Ch 2
Sep 17 Neurogenesis and cell migration Ch 3
Sep 24 Cell fate and determination Ch 4
Oct 1 Axonal pathfinding and adhesion molecules Ch 5

MIDTERM over chapters 1-5 only. Time and room TBA (early Oct)

Tu Oct 8 & Th Oct 10 NO CLASS MEETINGS

Oct 15 Student presentations of an exciting recent paper in developmental neurobiology.
Oct 22 Topographic mapping and synapse rearrangement Ch 6
Oct 29 Apoptosis and neurotrophic factors Ch 7
Nov 5 Synapse formation and functionality Ch 8
Nov 12 NO CLASS MEETING (Society for Neuroscience meetings)
Nov 19 Modulation of synaptic function, LTP Ch 9
Dec 3 Development of behavior Ch 10

FINAL EXAM over chapters 6-10 only TTBA, RTBA. (Finals week)

There will be one midterm (over chapters 1-5) and a final exam (over chapters 6-10) of approximately equal length and value. Students will also be evaluated on their oral presentation of a recent primary report in the field.