SYLLABUS: BIPN144 - Developmental Neurobiology

Professor: Ethan Bier

Tu/Th: 11:00-12:20 PM      SOLIS 107      SPRING 2012

Office Hours: Following class, Bonner Hall 4218

TA’s:  Graduate:   Melissa Lau: m7lau@ucsd.edu
      Marito Hayashi: mahayash@ucsd.edu
      Erik Soule: esoule@ucsd.edu
      Surina Hemani: shemani@ucsd.edu
      Tony Phan: tmphan@ucsd.edu

      Undergraduate: Shawn Shah: sdshah@ucsd.edu
                      Zachary Taich: ztaich@ucsd.edu

Date          Lecture                                      Reading
4/3           Overview of Neural Development: Model organisms Ch. 1*, Ch 3†
4/5           Dorsal-Ventral Patterning: Invertebrates          Ch. 1*, Ch 3
4/10          Dorsal-Ventral Patterning: Vertebrates            Ch. 1*, Ch 5†
4/12          Neural Induction                                  Ch. 1*, Ch 1 3†
4/17          Neuronal Competence and Identity                   Ch. 1*, Ch 5†
4/19          Neural Tube Patterning                             Ch. 2,4*
4/24          Lateral Inhibition                                 Ch. 1*, Ch 1,3†
4/26          MIDTERM 1 (Covers material through 4/24 lecture)  
5/1           Neural Specification /Localized Determinants       Ch. 4*
5/3           Eye Development/Cellular Interactions              Ch. 4*, Ch 4,6†
5/8           Neuronal Differentiation -> Cell Movement and Migration Ch. 3,5*
5/10          Axonal Navigation: Ventral Midline                 Ch. 5*
5/15          Axonal Navigation: Visual System                    Ch. 6*
5/17          Cell Death                                       Ch. 7*
5/22          Trophic Factors                                  Ch. 7*
5/24          MIDTERM 2 (Covers material through 5/22 lecture)  
5/29          Synapse Formation I: Inupt -> Target               Ch. 8*
5/31          Synapse Formation II: Target ->Inupt                Ch. 9*
6/5           Synaptic Modifiability                            Ch. 9,10*
6/7           Learning and Behavior                             Ch. 10

6/12          FINAL EXAM (Comprehensive) 11:30 AM – 2:30 PM

GRADING:  Midterm 1 = 25%
          Midterm 2 = 25%
          Final      = 50%

TEXTS:  *Required: Development of the Nervous System, Third Edition
       †Optional: The Coiled Spring: How Life Begins,

COURSE WEB SITE: http://classes.biology.ucsd.edu/bipn144.SP12/index.html