SYLLABUS: BIPN144 - Developmental Neurobiology

Professor: Ethan Bier

Tu/Th: 3:30-4:50 PM      WLH 2001      SPRING 2013

Office Hours: Following class, Bonner Hall 4218

Graduate TAs: Nicole Mercer: namercer@ucsd.edu
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Date   Lecture                                           Reading
4/2    Overview of Neural Development: Model organisms          Ch. 1*, Ch 3†
4/4    Dorsal-Ventral Patterning: Invertebrates       Ch. 1*, Ch 3
4/9    Dorsal-Ventral Patterning: Vertebrates           Ch. 1*, Ch 5†
4/11   Neural Induction                                    Ch. 1*, Ch 1, 3†
4/16   Neuronal Competence and Identity                  Ch. 1*, Ch 5†
4/18   Neural Tube Patterning                              Ch. 2, 4*
4/23   Lateral Inhibition                                 Ch. 1*, Ch 1, 3†
4/25   MIDTERM 1 (Covers material through 4/24 lecture)
4/30   Neural Specification /Localized Determinants        Ch. 4*
5/2    Eye Development/Cellular Interactions               Ch. 4*, Ch 4, 6†
5/7    Neuronal Differentiation -> Cell Movement and Migration Ch. 3, 5*
5/9    Axonal Navigation: Ventral Midline                 Ch. 5*
5/14   Axonal Navigation: Visual System                    Ch. 6*
5/16   Cell Death                                         Ch. 7*
5/21   Trophic Factors                                    Ch. 7*
5/23   MIDTERM 2 (Covers material through 5/22 lecture)
5/28   Synapse Formation I: Inupt -> Target               Ch. 8*
5/30   Synapse Formation II: Target -> Inupt                Ch. 9*
6/4    Synaptic Modifiability                             Ch. 9, 10*
6/6    Learning and Behavior                              Ch. 10
6/10   FINAL EXAM (Comprehensive)                         3:00 – 6:00 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.SP13/index.html