



EMBRYOLOGY 2009 Schedule

Week 1

Sat, 13 June		6:30 PM meet in Swope lobby
Sun, 14 June		9:30 AM All Courses Student Brunch at Swope Center 7:00 PM Reception & dinner – Bring your posters
Mon, 15 June	Morning Lecture	[Nipam Patel] Key concepts in developmental biology
	Morning Lab	General orientation and MBL tour; Safety orientation
	Afternoon Lab	[Paul Maddox] Light Microscopy: Principles and Applications [Nipam & Dave Matus] Cameras and Software
	Evening Lab	[Jon Henry and Mark Martindale] Toolmaking [Maddox, Patel, Matus] Practical Microscopy
Tues, 16 June	Lecture	[Scott Nichols] Choanoflagellates, sponges, and the origins of development
	Afternoon Lab	Choanoflagellates & sponges
	Chalk Talk	
	Evening Lab	Choanoflagellates & sponges
Wed, 17 June	Lecture	[Mark Martindale] Cnidarians and Ctenophores: Development and the Origins of Morphological Complexity
	Afternoon Lab	Cnidaria + Intro to injections
	Chalk Talk	
	Evening Lab	Cnidaria
Thurs, 18 June	Lecture	[Joel Rothman] Embryogenesis in <i>C. elegans</i>
	Afternoon Lab	<i>C. elegans</i>
	Chalk Talk	
	Evening Lab	<i>C. elegans</i>
Fri, 19 June	Lecture	[Dave Sherwood] <i>C. elegans</i> cell migration I. <i>C. elegans</i> vulval development II. Cell invasion and migration
	Afternoon Lab	<i>C. elegans</i>
	MBL lecture	
	Evening Lab	<i>C. elegans</i>
Sat, 20 June	Lecture	[David Fitch] Evo-devo with Nematodes
	Afternoon Lab	<i>C. elegans</i>
	Chalk Talk	
	Evening Lab	<i>C. elegans</i>

All lectures held at 9:00 AM in Speck Auditorium, unless otherwise noted.

Week 2

Sun, 21 June	Morning	Student Choice
	Afternoon	Scavenger Hunt
	Evening	Group Dinner
Mon, 22 June	Lecture	[Nipam Patel] The evolution of arthropod body patterning
	Afternoon Lab	Flies / arthropod
	Chalk Talk	
	Evening Lab	Flies / arthropod
Tues, 23 June	Lecture	[Steve Small] Early embryo patterning in <i>Drosophila</i>
	Afternoon Lab	Flies/ arthropod
	Chalk Talk	
	Evening Lab	Flies / arthropod
Wed, 24 June	Lecture	[Matt Ronshaugen] Regulatory RNAs
	Afternoon Lab	Flies/ arthropod (+ plankton tow)
	Chalk Talk	[Cassandra Extavour] Germline development
	Evening Lab	Flies/ arthropod
Thurs, 25 June	Lecture	[Andrea Brand] <i>Drosophila</i> neurogenesis
	Afternoon Lab	Flies/ arthropod
	Chalk Talk	
	Evening Lab	Flies/ arthropod
Fri, 26 June	Lecture	[Nipam Patel] Imaginal disk development
	Afternoon Lab	Flies/ arthropod
	MBL lecture	
	Evening Lab	Flies/ arthropod
Sat, 27 June	Lecture	[Richard Harland] I. <i>Xenopus</i> development II. The organizer experiment
	Afternoon Lab	Flies/ arthropod
	Evening	Show 'N Tell

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Week 3

Sun, 28 June		Whale watching trip in Provincetown
Mon, 29 June	Lecture	[Ray Keller] <i>Xenopus</i> gastrulation
	Afternoon Lab	Frog
	Chalk talk	[Richard Harland & Lee Niswander] Neural tube development
	Evening Lab	Frog
Tues, 30 June	Lecture	[Alex Schier] Nodal signaling: Morphogens and microRNAs
	Afternoon Lab	Frog
	Chalk Talk	
	Evening Lab	Fish
Wed, 1 July	Morning Lab	Fish
	Afternoon Lecture	[Sharon Amacher] I. Visualizing in vivo the dynamics of the zebrafish segmentation clock II. Targeted gene disruption in zebrafish using designed zinc finger nucleases.
	Chalk Talk	
	Evening Lab	Frog/fish
Thurs, 2 July	Lecture	Frog/fish
	Afternoon Lecture	[Bruce Appel] Zebrafish as a model for vertebrate neural development
	Chalk Talk	[Andres Collazo] Ear development
	Evening Lab	Frog/fish
Fri, 3 July	Morning Lab	Frog/fish
	Afternoon Lecture	[Mike Shapiro] Sticklebacks
	MBL lecture	
	Evening Lab	Frog/fish
Sat, 4 July	Lecture	
	Afternoon	Parade
	Evening	Fireworks

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Week 4

Sun, 5 July		
Mon, 6 July	Lecture	[Olivier Pourquie] Axis segmentation
	Afternoon Lab	Chick lab
	Chalk Talk	[Federica Bertocchini] Early chick development
	Evening Lab	Chick lab
Tues, 7 July	Lecture	[Lee Niswander] Limb Development
	Afternoon Lab	Chick lab
	Chalk Talk	[Clare Baker] Neural Crest
	Evening Lab	Mouse lab
Wed, 8 July	Lecture	[Paul Trainor] Craniofacial development, disease, and evolution
	Afternoon Lab	Mouse lab
	Evening Lab	Chick mouse lab
Thurs, 9 July	Morning lecture	[Richard Behringer] I. Mouse Embryo Development II. Mammalian Diversity: Comparative Developmental Biology
	Afternoon lab	Chick mouse lab
	Evening Lecture	[Lee Niswander] Lung branching morphogenesis
	Evening Lab	Chick mouse
Fri, 10 July	Lecture	[Lori Sussel] Pancreas Organogenesis
	Afternoon Lab	Chick mouse
	MBL lecture	
	Evening lab	Chick mouse
Sat, 11 July	Morning lecture	[Terry Magnuson] Epigenetics
	Afternoon lecture	Chick/mouse lab + Zoo lab
	Evening	Show 'N Tell

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Week 5

Sun, 12 July	Morning & Afternoon	Student Choice
	Evening	Group Dinner: Student Created Fiesta
Mon, 13 July	Lecture	[Bob Zeller] Ascidian Development
	Afternoon Lab	Ascidian
	Chalk Talk	
	Evening Lab	Sea urchin
Tues, 14 July	Lecture	[Dave McClay] Sea urchin development
	Afternoon Lab	Sea urchin 2
	Chalk Talk	
	Evening Lab	Ascidian 2
Wed, 15 July	Lecture	[Jon Henry] Spiralian development
	Afternoon Lab	Mollusc/nemertean , marine collection (snorkeling)
	Chalk Talk	
	Evening Lab	Mollusc/nemertean
Thurs, 16 July	Lecture	[Mike Levin] Left/right asymmetry and bioelectric fields
	Afternoon Lab	Sea urchin/ascidian
	MBL lecture	
	Evening Lab	Sea urchin/ ascidian
Fri, 17 July	Lecture	[Elaine Seaver] Annelid development
	Afternoon lab	Annelid lab
	MBL lecture	
	Evening Lab	Annelid lab
Sat, 18 July	Lecture	[Margaret McFall-Ngai] The “language” of symbiont-driven, postembryonic development in the squid/Vibrio system
	Afternoon lab	Squid lab
	Chalk Talk	
	Evening Lab	Sea urchin/squid

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Week 6

Sun, 19 July	Evening	BBQ
Mon, 20 July	Morning lab	[Alejandro Sanchez Alvarado] Planaria and regeneration
	Afternoon Lecture	Planaria lab
	Chalk Talk	
	Evening Lab	Planaria lab
Tues, 21 July	Lecture	[Alexa Bely] I. Annelid Regeneration II. Evolution of Regeneration
	Afternoon Lab	Planaria/annelid
	Chalk Talk	
	Evening Lab	Planaria/annelid
Wed, 22 July	Lecture	[Nipam Patel] Compartments in development
	Afternoon Lab	Mollusc lab
	Chalk Talk	
	Evening Lab	Marine collection
Thurs, 23 July	Lecture	[Dennis Roop] Stem Cells
	Afternoon Lab	lab
	Chalk Talk	
	Evening Lab	Annelids/molluscs
Fri, 24 July	Lecture	[Mike Levine] Conclusions: Principles of Development
	Afternoon lab	Planaria
	MBL lecture	
	Evening Lab	Planaria
Sat, 25 July	Morning	Course Review
	Afternoon	Show N' Tell
	Evening	Party
Sun, 26 July		Departure

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