Development Biology: Biology 411 - Spring 2013

Instructor: Dr. Mark Cooper ***TA: Harry Hunter***

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Text: *Developmental Biology* by Scott F. Gilbert, 9th Edition

Lecture: M-W-F, 10:30-11:30 -- Sieg Hall 225

Discussion Sections -- PAA A212 (see online schedule)

Dr. Cooper's Office Hour 11:30-12:20 PM Fridays, or by appt. Kincaid Hall 322

Harry Hunter's Office Hour 8:30-9:30 AM Tuesdays, or by appt. Kincaid 212

	Day/Date			Lecture Topic	Readings	Discussion Section
1	M	Apr	1	Introduction to Course	Ch 1, pgs 4-30	The Littlest Human (2005) Sci. Amer. 292:56-65
	W	Apr	3	Developmental Biology: the anatomical tradition	Ch 1, pgs 4-30	
	F	Apr	5	Medical aspects of developmental biology	Ch 17, pgs 625-634	
2	M	Apr	8	The genetic core of development	Ch 2, pgs 31-52	Film: Life's Greatest Miracle (NOVA documentary)
	W	Apr	10	The genetic core of development	Ch 2, pgs 52-68	
	F	Apr	12	Cell-Cell Communication 1	Ch 3, pgs 69-88	
3	M	Apr	15	Cell-Cell Communication 2	Ch 3, pgs 88-108	Migeon, B.R. (2006) The role of X inactivation and cellular mosaicism in women's health and sex-specific diseases.
	W	Apr	17	Fertilization 1 (H Hunter)	Ch 4, pgs 121-138	
	F	Apr	19	Fertilization 2	Ch 4, pgs 138-158	
4	M	Apr	22	Early invertebrate development	Ch 5, pgs 159-177	Review Session for Midterm 1
	W	Apr	24	Early invertebrate development	Ch 5, pgs 178-202; pp. 109-119	
	F	Apr	26	**Midterm 1 (thru Ch 4)**	no readings	
5	M	Apr	29	Drosophila axis specification	Ch 6, pgs 203-222	Cell Cleavage / Organismic Asymmetries
	W	May	1	Drosophila axis specification	Ch 6, pgs 223-240	
	F	May	3	Amphibian axis formation	Ch 7, pgs 241-266	
6	M	May	6	Amphibian axis formation	Ch 7, pgs 267-286	Essner et al. (2005) Dev. 132:1247-1260 Left-right asymmetry in zebrafish
	W	May	8	Early vertebrate development	Ch 8, pgs 287-306	
	F	May	10	Early vertebrate development	Ch 8, pgs 307-322	
7	M	May	13	Ectoderm	Ch 9, pgs 322-353	Review Session for Midterm 2
	W	May	15	Neural development	Ch 9, pgs 354-371	
	F	May	17	**Midterm 2 (thru Ch 8)**	no readings	
8	M	May	20	Neural Crest Cells	Ch 10, pgs 373-392	Sato, Y. et al. (2002) Dev. 129:3633-3644. somite boundary formation
	W	May	22	Neural Crest Cells	Ch 10, pgs 393-410	
	F	May	24	Paraxial and intermediate mesoderm	Ch 10, pgs 393-410	
9	M	May	27	***Memorial Day Holiday***	no readings	Carmona-Fontaine, C. et al. (2008) Nature 456:957 961. contact inhibition of locomotion
	W	May	29	Lateral plate mesoderm and endoderm	Ch 12, pgs 445-466	
	F	May	31	Lateral plate mesoderm and endoderm	Ch 12, pgs 466-484	
10	M	June	3	Regeneration and aging	Ch 15, pgs 560-582	Review Session for Midterm 3
	W	June	5	Medical implications and applications	Ch 17, pgs 635-658	
	F	June	7	Developmental Biology and Neurological Disorders	selected readings	
11	M	June	10	**Midterm 3 – 8:30-10:20 am, SIG 225**		

Grading: 3 Midterms, 100 pts each (open book) +
100 pts for Discussion Section
(see course website for example exams)

Course Website: courses.washington.edu/develop/