Biology 411, Winter 2012

Instructors:

Dr. Mark Cooper ***TA: TakuoYamaki***

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

Lecture: M-W-F, 1:30-2:20 -- Johnson Hall 175

Discussion Sections -- HCK 446

AA 11:30-12:20 T; AB 12:30-1:20 T; AC 10:30-11:20 Th

Dr. Cooper's Office Hour 10:30-11:20 F, or by appt. Kincaid Hall 322

Takuo Yamaki's Office Hour 3:30-5:00 pm M, or by appt. Johnson Hall 024

	Day/Date			Lecture Topic	Readings	Discussion Section
1	W	Jan	4	Developmental Biology: the anatomical tradition	Ch 1, pgs 4-30	The Littlest Human (2005) Sci. Amer. 292:56-65
	F	Jan	6	Medical aspects of developmental biology	Ch 17, pgs 625-634	
2	M	Jan	9	The genetic core of development	Ch 2, pgs 31-52	Film: Life's Greatest Miracle (NOVA documentary)
	W	Jan	11	The genetic core of development	Ch 2, pgs 52-68	
	F	Jan	13	Cell-Cell Communication 1	Ch 3, pgs 69-88	
3	M	Jan	16	***Holiday - Martin Luther King, Jr. Day***	no readings	Migeon, B.R. (2006) The role of X inactivation and cellular mosaicism in women's health and sex-specific diseases.
	W	Jan	18	Cell-Cell Communication 2	Ch 3, pgs 88-108	
	F	Jan	20	Snow Day	Snow Day	
4	M	Jan	23	Fertilization 1	Ch 4, pgs 121-138	Review Session for Midterm 1
	W	Jan	25	Early invertebrate development	Ch 5, pgs 159-177	
	F	Jan	27	Early invertebrate development	Ch 5, pgs 178-202; pp. 109-119	
5	M	Jan	30	**Midterm 1 (thru Ch 4, p. 138)**	no readings	Cell Cleavage / Organismic Asymmetries
	W	Feb	1	Drosophila axis specification	Ch 6, pgs 203-222	
	F	Feb	3	Drosophila axis specification	Ch 6, pgs 223-240	
6	M	Feb	6	Amphibian axis formation	Ch 7, pgs 241-266	Essner et al. (2005) Dev. 132:1247-1260 Left-right asymmetry in zebrafish
	W	Feb	8	Amphibian axis formation	Ch 7, pgs 267-286	
	F	Feb	10	Early vertebrate development	Ch 8, pgs 287-306	
7	M	Feb	13	Early vertebrate development	Ch 8, pgs 307-322	Review Session for Midterm 2
	W	Feb	15	Ectoderm	Ch 9, pgs 322-353	
	F	Feb	17	**Midterm 2 (thru Ch 8)**		
8	M	Feb	20	***Holiday - Presidents Day***	no readings	Sato, Y. et al. (2002) Dev. 129:3633-3644. somite boundary formation
	W	Feb	22	Neural development	Ch 9, pgs 354-371	
	F	Feb	24	Neural Crest Cells	Ch 10, pgs 373-409	
9	M	Feb	27	Neural Crest Cells	Ch 10, pgs 426-441	Saude, L. et al. (2005) Nat Cell Biol. 7:918-920. left-right asymmetry gene
	W	Feb	29	Paraxial and intermediate mesoderm	Ch 11, pgs 413-444	
	F	Mar	2	Fertilization 2 (Takuo Yamaki)	Ch 4, pgs 138-158	
10	M	Mar	5	Lateral plate mesoderm and endoderm	Ch 12, pgs 445-484	Review Session for Midterm 3
	W	Mar	7	Regeneration and aging	Ch 15, pgs 560-582	
	F	Mar	9	Medical implications and applications	Ch 17, pgs 635-658	
11	M	Mar	12	**Midterm 3 – 2:30-4:20 pm, JHN 175**		

Grading: 3 Midterms, 100 pts each (20 short answer questions, open book) +
100 pts for Discussion Section
(see course website for example exams;)

Course Website: courses.washington.edu/develop/