

## LS4-1 Syllabus - Spring 2008

Lecture: MWF 9:00-9:50 AM, La Kretz 110

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Course material: Genetics, from Genes to Genomes, 3<sup>rd</sup> edition, Hartwell, Hood et al.  
Interactive Genetics, CD-ROM and workbook  
Lecture slides on course web site,  
<http://www.lsic.ucla.edu/classes/spring08/>

Grading: Your grade will be determined on a curve, with a maximum of 470 pts. There will be assignments in most discussion sections (10 pts each), two midterms (100 pts) and a final (200 pts). The lowest or missed section score will be dropped.

Discussion sections: This is a time to go over concepts, ask questions and do in-class assignments. There will be 70 points associated with section. You must attend the one you're enrolled in or change with permission of TA.

Assignments: Problems will be assigned from both the Interactive CD-ROM/Workbook and from the back of each chapter in your text. These will not be graded but will help you prepare for the exams.

Course web site: On your course website you will find a copy of the syllabus, the problem assignments, practice midterms and keys to exams. We will also broadcast each lecture, which you can access from the course web site. Lecture slides will be posted in advance and may be downloaded/printed for use in taking notes during lecture.

Open door policy: Students are welcome to drop by our offices at anytime to ask questions. We are not always there, and sometimes we may not have time right then, but we'll try to arrange a convenient time. If possible, email or call us (Andrew Diener: 267-4832; John Merriam: 825-2256).

Wk.	Date	Lect.	Topic	Lecturer	Chapter: Pages
1	M March 31	1	Biological inheritance & information	Merriam	
1	W April 2	2	Mendel: diploid genetics	Mendel	2: 13-29
1	F April 4	3	Pedigrees and probability/prediction	Diener	2: 30-33
2	M April 7	4	Single-gene complexities	Diener	3: 45-56
2	W April 9	5	Two-gene Interactions	Diener	3: 56-71
2	F April 11	6	Mitosis & meiosis	Merriam	4: 81-105
3	M April 14	7	X-linked inheritance	Merriam	4: 105-113
3	W April 16	8	Genetic recombination & linkage	Merriam	5: 123-135
3	F April 18	9	Genetic mapping	Merriam	5: 135-143
4	M April 21	10	Biochemical genetics	Diener	7: 232-234; 15: 539-550
4	W April 23	11	Conjugation	Diener	15: 550-556
4	F April 25	12	Bacterial genetic maps	Diener	15: 556-562
5	M April 28	1ST EXAM (Lect. 1-9) from 5 PM to 6:50 PM			
5	W April 30	13	Transduction	Diener	15: 562-566
5	F May 2	14	Cytoplasmic inheritance	Diener	16: 581-603
6	M May 5	15	Population genetics	Merriam	21: 757-773
6	W May 7	16	Genetic mutation	Merriam	7: 224-232, 234-239
6	F May 9	17	Mutants/proteins/phenotypes	Merriam	8: 259-261, 264-265, 285-291
7	M May 12	18	Chromosome description	Merriam	13: 465-479
7	W May 14	19	Chromosome rearrangements	Merriam	14: 489-491, 494-498, 504-508, 516-526
7	F May 16	20	Eukaryotic gene regulation	Merriam	18: 643-652, 665-668
8	M May 19	2ND EXAM (Lect. 10-17) from 5 PM to 6:50 PM			
8	W May 21	21	Genetic analysis: cell cycle control	Merriam	19: 685-709
8	F May 23	22	Analysis of genomes	Diener	10: 351-375
9	M May 26	Memorial Day Holiday			
9	W May 28	23	Individual genome and genetic tests	Diener	11: 391-419
9	F May 30	24	Gene prediction & genome comparison	Diener	8: 284-285; 22: 799-813
10	M June 2	25	Genetic manipulation	Diener	TBA
10	W June 4	26	Genome analysis of HIV infection	Diener	TBA
10	F June 6	27	Wrap-up & current genetics		
	M June 9	FINAL EXAM from 8 AM to 11 AM			

Week	Date	Lect.	Solved Problems	Problems (Chapter: Problems)	Interactive Genetics Problems	
1	M	March 31	1			
1	W	April 2	2	2: I, II	2: 1-12	Mendelian Problems; FlyLab 1& 2
1	F	April 4	3	2: III	2: 13-37	Pedigree & Probabilities
2	M	April 7	4	3: I, III	3: 1-19	Genotype/Phenotype 1-3, 7
2	W	April 9	5	3: II	3: 20-39	Genotype/Phenotype 4-6
2	F	April 11	6	4: I	4: 1-22	Chromosome Theory, Mitosis & Meiosis
3	M	April 14	7	4: II, III	4: 23-40	Chromosome Theory, X-link; Fly Lab 3-6
3	W	April 16	8	5: I	5: 1-18	Linkage 1-4
3	F	April 18	9	5: II	5: 19-27	Linkage 5 & 6
4	M	April 21	10		7: 25-32; 15: 1-6, 8, 9	Biochemical Genetics
4	W	April 23	11	15: II	15: 10-15	Bacterial Genetics, Conjugation 1 & 2
4	F	April 25	12		15: 16-21	Bacterial Genetics, Conjugation 3-5
<b>5</b>	<b>M</b>	<b>April 28</b>			<b>1st EXAM</b>	
5	W	April 30	13	15: III	15: 20, 27	Bacterial Genetics, Transduction 1-4
5	F	May 2	14		16: 2-4, 13-16, 18-23, 25-27	
6	M	May 5	15	21: I, II, III	21: 2, 3, 6, 9-11	Population Genetics
6	W	May 7	16	7: II, III	7: 16-35	
6	F	May 9	17	8: I	8: 4, 5, 7, 31-35	
7	M	May 12	18	13: I, II	13: 1, 6-8, 10, 12, 19, 28-31	
7	W	May 14	19	14: I	5, 33, 35, 36, 42	
7	F	May 16	20	18: III	18: 6, 7, TBA	
<b>8</b>	<b>M</b>	<b>May 19</b>			<b>2nd EXAM</b>	
8	W	May 21	21	19: III	19: 4, 5, 8	
8	F	May 23	22	10: I	10: 1-32	
<b>9</b>	<b>M</b>	<b>May 26</b>			<b>Memorial Day Holiday</b>	
9	W	May 28	23	11: I, II	11: 1-18	
9	F	May 30	24	22: I, II	8: 29, 30; 22: 7-22	
10	M	June 2	25		TBA	
10	W	June 4	26		TBA	
10	F	June 6	27			
	<b>M</b>	<b>June 9</b>			<b>FINAL EXAM</b>	