Revised 25 March 2010

WK	DATE	DAY	LECTURE TOPICS	READINGS / ASSIGNMENTS	LAB (meet in LSB 146 unless noted below)
1	Jan 26	T	Course mechanics	37-60, 90-105; Angier 2007; Baum et al. 2005a	***No lab first week of classes***
	28	Th	Evolutionary thinking		
2	Feb 2	T	Genetic variation; Mutation	143-50; 152-66; 169-82; 210-12; Problem set 1 **(due 2/12, Friday by 5pm)**	Artificial selection 1 – Characterize traits, Phenotypic variation, Experimental set-up
	4	Th	Population genetics		
3	Feb 9	T	Selection	73-89; 182-207; 212-18; Freeman & Byers 2006; ***Hori 1993***; ***Mullen & Hoekstra 2008***	Mating systems 1 – Introduction to project; Tissue collection; Crossing design
	11	Th	Selection		
4	Feb 16	T	Selection; Gene flow	223-31; ***Storfer & Sih 1998***; ***Harper & Pfennig 2008;*** **Problem set 2 (due 2/23)**	**Microevolutionary simulations (due 2/23)**; Meet in Seeley-Mudd 002
	18	Th	Gene flow		
5	Feb 23	T	Finish up weeks 1-4; Review	–	Mating systems 2 – RNA extraction; cDNA synthesis; PCR of *S-RNase* gene
	25	Th	**Exam 1**		
6	Mar 2	T	Genetic drift	232-49; ***Bouzat et al. 1998***; Ingvarsson 2002; ***Miller et al. 2008***; **Problem set 3 (due 3/11)**	Mating systems 3 – Allele-specific PCR of LA2744 plants; Pollinate LA2744, LA4125
	4	Th	Genetic drift		
7	Mar 9	T	Nonrandom mating	264-77	Mating systems 4 – Electrophoresis & genotyping of LA2744
	11	Th	Population substructure		
8	Mar 16	T	***Spring break***		
	18	Th			
9	Mar 23	T	No class	249-64; Sharp 1997; ***Dorus et al. 2007***	Mating systems 5 – Allele-specific PCR of LA4125 plants
	25	Th	Neutral theory; Molecular evolution		
10	Mar 30	T	Finish Molecular evolution	281-95; 319-32; ***Schemske & Bradshaw 1999***; **Problem set 4 (due 4/15)**	Artificial selection 2 – Measure traits & group project instructions
	Apr 1	Th	Linkage, Quantitative traits		
11	Apr 6	T	Quantitative traits, Phenotypic selection	333-50; ***Coltman et al. 2003***	Mating systems 6 – Gels for LA4125, Sequencing prep (ExoSAP), if necessary
	8	Th	Selection gradients, Heritability		
12	Apr 13	T	Finish up weeks 6-11; Review PS4	605-34; ***Hoskin et al. 2005***; Pennisi 2006; ***Pryke & Griffith 2009***	**Artificial selection 3 – Group presentations (meet in Seeley-Mudd 002)**
	15	Th	Species, Speciation		
	Apr 18	**Sun**	**Exam 2 • 7pm in LSB 146**		
13	Apr 20	T	Phylogenetic inference	111-37; Gilbert et al. 2007; ***Feldman et al. 2009***; ***van Kleunen et al. 2008***	Mating systems 7 – Download/process sequences (meet in Seeley-Mudd 002)
	22	Th	Phylogenetic comparative biology		
14	Apr 27	T	Evolution of sex	302-12; 401-38; 621-23; Ridley 1993; Lively & Dybdahl 2000; ***Zuk et al. 2006***; ***Velando et al. 2008***	Mating systems 8 – Assignment instructions (meet in Seeley-Mudd 002)
	29	Th	Sexual selection		
15	May 4	T	Life-history evolution	483-517; **Critique due (Tuesday, 4 May)**	No lab last week of classes
	6	W	Finish up weeks 12-15; Review		