

Date	Pre-class Readings & Activities	Class Focus	Major Assignments
W 8/28		Science Writing	
F 8/30	Reading # 1 http://www.forest.sr.unh.edu/richardson/MorisetteFrontiers2009.pdf , Optional Reading http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=125511&org=NSF&form=news	Introduction to Phenology	
M 9/2	Labor Day Holiday	Labor Day Holiday	Labor Day Holiday
W (LAB) 9/4	What information do you need to write a paper like we looked at on Wednesday? The readings below are all worth reviewing. #1 http://learningcenter.nsta.org/files/jcst1206_25.pdf #2 http://radicalscholarship.wordpress.com/2013/08/25/advice-to-students-and-authors-submitting-your-work/ #3 http://www.americanscientist.org/issues/pub/the-science-of-scientific-writing	What is the scientific method? Lab: Experimental design	
F 9/6	Reading #1 McMillan chap 1 & McMillan 210-217 Reading #2 McDonald pgs 15-20 - Hypothesis testing http://chronicle.com/article/Medical-Schools-Prepare/141251/?cid=wb&utm_source=wb&utm_medium=en	What is the scientific method?	

M 9/9	Chamberlin 1965 The Method of Multiple Working Hypotheses Summary: http://www.gly.uga.edu/railsback/railsback_chamberlin.html Full paper: http://www.auburn.edu/~tds0009/Articles/Chamberlain%201965.pdf Supplemental Reading: Rack and Field http://www.nature.com/news/2009/090819/pdf/460944a.pdf	Library (AM visit) Types of scientific literature, use of electronic databases	Idea Proposal due Mon, Sept. 9, 4:00 PM. (2 paragraphs)
W (LAB) 9/11	Reading #1 McMillan chap 2 Reading #2 McDonald pgs 7-12 - Kinds of biological variables For Lab: Chapter 1.1 in Dalgaard	Types of Data managing data	
F 9/13	Reading #1 Chapter 2.2 in Dalgaard Optional Reading Chap 3 in WS	Measures of central tendency and dispersion.	
M 9/16	Reading #1 Chap 1 WS or on Moodle Reading #2 http://www.masterenbiodiversidad.org/docs/asig3/Hurlbert_1984_Pseudoreplicati on.pdf Reading #3 http://udel.edu/~mcdonald/statsampling.html Optional Reading Chap 4 WS	Sampling Key elements of a good proposal	Summary and citations due. Assignments should be emailed to Dr. Quinn before class starts
W (LAB)	Reading #1 Chap 4 in Dalgaard	Displaying data, types of figures	Bring two examples of a

9/18	Reading #2 http://dynamicecology.wordpress.com/2012/11/19/do-bird-papers-have-the-best-figures/ Reading #3 McMillan 210-217 Watch: http://www.youtube.com/watch?v=dmzdgRIS7SI&list=TLyd4Kj5u5qdhKI46KYfvxntnc6PijC0d4 Optional Reading Chap 3 in WS	Lab: Practice in R & 2 min presentation	figure to lab. Type a concise two paragraph summary as to what is good and bad about the figures.
F 9/20	Reading #1 http://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/308269/ Reading #2 http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.0020124	Sampling and stat. inference	Final Proposal due Fri, Sept. 20, 4:00 PM
M 9/23	Reading #1 http://sociobiology.wordpress.com/2013/03/25/easy-tips-for-effective-writing/ Reading #2 http://www.americanscientist.org/issues/pub/the-science-of-scientific-writing	Writing papers; overview, Writing a title and an abstract	
W (LAB) 9/25	Reading #1 http://www.britishecologicalsociety.org/wp-content/uploads/Peer-Review-Booklet.pdf	Class: Peer Review	Write an abstract and title for the paper. Bring 3 printed copies to class (not lab)
F 9/27	Reading #1 McMillan chap 4 Reading #2 http://conservationbytes.com/2012/10/22/how-to-write-a-scientific-paper/	Writing papers;	Dinner presentation of ideas across class

	Other Resources http://dynamicecology.wordpress.com/2012/11/14/clear-writing/ and http://writingajournalarticle.wordpress.com/		4:00 pm
M 9/30	Zuir et al. and in Moodle		
W (LAB) 10/2	Resource http://www.nature.com/scitable/topic/scientific-communication-14121566	Exam 1	
F 10/4	No readings		
M 10/7	No readings	Philosophy of stats Spectrum of Stats tests. Choosing statistical tests (type of data, Types of distribution, testing for heterogeneity, distribution)	Rough draft Introduction due Mon, Oct 7, 4 PM;
W (LAB) 10/9	Chapter 6 in Dalgaard	Diagnostics to avoid statistical mistakes	peer review due Wed, Oct 9, end of day.
F 10/11	McMillan chap 4	Choosing statistical tests	

		Regression/correlation, Nonparametric comparisons	
M 10/14	Fall Break	Fall Break	Fall Break
W (LAB) 10/16		Choosing statistical tests Regression/correlation, Nonparametric comparisons	
F 10/18	NO CLASS	NO CLASS	NO CLASS
M 10/21	Chapter 7 in Dalgaard and Non-parametric reading in Moodle	Choosing statistical tests ANOVA, Nonparametric comparisons	Rough draft Methods + revised Intro and reverse outline due Mon, Oct 21, 4 PM;
W (LAB) 10/23	Chapter 7 in Dalgaard	Choosing statistical tests ANOVA, Nonparametric comparisons	peer review due We, Oct 23, end of day
F 10/25	Chapter 5 in Dalgaard	Choosing statistical tests t-test, Nonparametric	

		comparisons, Chi-square analysis	
M 10/28	McMillen	Writing papers; Results	
W (LAB) 10/30		Results/Tables	
F 11/1	http://wpacouncil.org/node/9 -	Ethics;	
M 11/4	Reading #1 http://sociobiology.wordpress.com/2013/04/03/what-you-do-not-know-about-ethical-science-practice/ Review pg 13 in http://www.britishecologicalsociety.org/wp-content/uploads/Public_Peer-Review-Booklet.pdf	Ethics;	
W (LAB) 11/6		Managing Data/Writing your discussion	Exam 2 in lab
F 11/8		Writing your discussion	
M 11/11		Writing your discussion	
W (LAB)		Research with humans (IRB)	

11/13		BP Guest lecture	
F 11/15		Lab animal care	Rough draft Results and Discussion and Reverse outline due Fri. Nov 15, 4 PM;
M 11/18	Must-Have Job Skills in 2013 - WSJ.com http://online.wsj.com/news/articles/SB10001424127887324735104578118902763095818 You do not need to read but this is a good resource https://owl.english.purdue.edu/owl/section/6/23/	Careers in biology and professional resume's	peer review due Mon, Nov 18,
W (LAB) 11/20	Reading #1 McMillan pgs 218-227 Reading #2 http://www.nature.com/scitable/topic/career-planning-14121550 Reading # 3 http://sciencecareers.sciencemag.org/sites/default/files/step_by_step.pdf	Careers in biology and professional resume's	
F 11/22		Communication Sci. beyond research	
M 11/25	Reading #1 PLOS Biology: An Introduction to Social Media for Scientists	Communication Sci. beyond research	Rough draft Paper due Tuesday, Nov 26th, 11:59 PM
W	Thanksgiving Holiday	Thanksgiving	Thanksgiving

(LAB) 11/27		Holiday	Holiday
F 11/29	Thanksgiving Holiday	Thanksgiving Holiday	Thanksgiving Holiday
M 12/2	Optional Reading #1 Chapter Sections 13.1, 15.1 in Dalgaard, Optional Reading #2 Anderson et al. 2000,	Alternative statistical analyses	IRB Due
W (LAB) 12/4	TBA	Alternative statistical analyses	
F 12/6	Reading #1 McMillan pgs 201-212 Reading #2 http://www.conbio.org/professional-development/advice-for-students/help-designing-posters http://blog.hubspot.com/blog/tabid/6307/bid/34274/7-Lessons-From-the-World-s-Most-Captivating-Presenters-SlideShare.aspx)	Preparing poster presentations	
M 12/9			Final Paper due Monday, December 9th, 4:00 PM