

Short Course: R Programming for Ecologists**Readings and Tutorials:****Primary Texts (weekly reading assignments TBA)**(1) R Developer Team: *An Introduction to R*(2) Paradis, Emmanuel: *R For Beginners*

Other readings to be suggested from online literature

Additional materials available on the Scientific Computing Web Site:<http://www.nceas.ucsb.edu/scicomp/RProgTutorials.htm>**Prerequisite:** Familiarity with MS Windows, Mac OS X, or UNIX / LINUX operating system**Course Objective:** A practical, 'hands-on' introduction to the R Programming Language and analytical environment using examples from the ecological and geospatial research communities.

R is a large and complex subject. This course will address the basics, provide you with a foundation from which you can build advanced knowledge, and expose you to the resources that you need to make use of the R analytical environment.

Course Structure:

- o Meetings (6) : 60 - 90 minute duration, one or two meetings per week
- o Programming / Analysis examples Two per week. *If possible, drawn from your own work.*

Meeting	Lecture Topic(s)	Suggested Reading (1): R Dev Team (2) Paradis	Programming Exercise
1	Overview of the R Environment Installing and Configuring R Overview: R Data Objects End-to-end R analysis example	(1): pp. 2 – 18 (2): pp. 2 - 27 Other R tutorials (optional) R Install and Admin Guide	'end-to-end' analysis using your own data
2	Data Management in R Interactive and Batch use of R: Writing and Running R scripts Overview: R Statistical Tools	(1): (2):	TBA
3	Focus: R data visualization Extending R capability: Add-on Packages	(1): (2): R Install and Admin Guide	TBA
4	Writing Functions in R	(1): (2):	
5	Special Topic: Geospatial Analysis in R	(1): (2):	TBA
6	Special Topic: R Interface to GIS, other packages	(1): (2):	TBA