

R for Ecologists (and anyone else!) BIOL 7901 – Fall 2009

Louisiana State University – Department of Biological Sciences

Fridays, 9:10 - 10:00 a.m.; Room A663 Life Sciences Annex (or A347, when announced)

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Course web site: <http://www.biology.lsu.edu/webfac/kharms/BIOL7901Fall2009.htm>

Course description: The burgeoning use of R for statistical computing, simulation modeling, graphics, exploratory data analysis, *etc.* in ecology (and myriad other disciplines) provides the motivation for this seminar.

During the first few weeks of the semester I will lead you through the *R Self-tutorial I* developed to teach the basics of R programming. I refer to the document as a “self-tutorial,” since I leave it freely available on the course web site to allow anyone to obtain the document and teach herself/himself how to program in R.

During the remainder of the semester you, the students, will lead the class through exercises and new R code that you develop, to help us go beyond the basics of R programming.

Even though the first few sessions of the seminar are designed for those who have not used R previously, you will be encouraged to work at your own pace, and to participate at your own level of proficiency, so students at any programming skill level can benefit from the seminar.

Laptop computers: If you have access to a laptop computer that you can bring to class, please bring it to each class period. If you do not have access to a laptop computer, we will have you work together in class with another student who has a laptop computer.

Assessments and grades: Performance in graduate seminars at LSU is rated as either *Satisfactory* or *Unsatisfactory*. For a rating of *Satisfactory*, I expect you to become reasonably proficient as (at least) a beginning R user, by participating in class and by working outside of class on improving your R programming skills. In addition, you will be asked to develop some new R code, to share with the rest of the class via the course web site and an in-class presentation.

R code to share with the class: You will develop new R code that demonstrates how to use key functions or R packages, how to produce useful output, or how to accomplish just about anything else in R. You will submit a Word document that details the steps one should take to understand and implement your code. The Word document format should follow the style of Dr. Harms’ *R Self-tutorial*; the document will be shared on the course web site. You will also lead the class through your Word document “self-tutorial” during an in-class session.