Description  Data analysis begins with the search for pattern. Having found pattern, we then ask whether it is real or just an artifact of sampling. Most stat courses concentrate on the second problem but ignore the search for pattern. This course reverses that usual emphasis. Students will learn to manipulate data using the R statistical package and to search for pattern using the graphical methods that come with R.

Prerequisites  Any introductory stat course

Grading  Lab projects (75 pts), final project (25 pts).

Contact  After class and by appointment. 206a Stewart, 801–581-5529, rogers@anthro.utah.edu.

Plagiarism  Any cheating or plagiarism will result in a failing grade for the course. See sections II and V of the student code (http://www.admin.utah.edu/ppmanual/8/8-10.html) for details.

Equal access provisions  The University seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, then reasonable prior notice must be given to the instructor and to the Center for Disability Services, 162 Olpin Union. Call 581–5020 to make arrangements.

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture</th>
<th>Reading</th>
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<tr>
<td>Jan 11 W</td>
<td>Lecture: Introduction to the course</td>
<td>E:2</td>
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<td>Lecture: How to make a bad graph</td>
<td>O:1–3;8.1–8.3</td>
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<td>18 W</td>
<td>Lecture: R:Basics</td>
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<td>Lab 1: Intro to R</td>
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<td>25 W</td>
<td>Lecture: Quantiles</td>
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<td>Lab 2: Quantiles and QQ plots</td>
<td>V:2.0–2.2,2.4;M:4</td>
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<td>Feb 01 W</td>
<td>Lecture: TMD plots, box plots, one-way fits</td>
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<td>Lab 3: TMD plots, box plots, one-way fits</td>
<td>M:4</td>
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08 W Lecture: Scatter plots: fits and residuals  V:3.0–3.3
   Lab 4: The history of brain size
15 W Lecture: Robust fits and slicing  V:3.4–3.10
   Lab 5: Hormones
22 W Lecture: Permutation tests  permutation lab
   Lab 5 continuation: Hormones
Mar 01 W Lecture: The bootstrap  bootstrap lab
   Lab 6: Permutation tests
08 W Lecture: Trivariate data: coplots  V:4.0–4.7
   Lab 7: The bootstrap
15 W *** NO CLASS
22 W *** NO CLASS
29 W Lecture: Multiway dotplot  V:6.1
   Lab: Student projects
Apr 05 W Lecture: Multiway additive fits  V:6.2–6.5
   Lab: Student projects
12 W Student presentations
19 W *** NO CLASS

**Key to readings** E: *Elements of Graphing Data*; M:Murrell; O:Owen; V: *Visualizing Data*. (See readings page on course website for details.)