

## ***NEW GRADUATE SEMINAR FOR SPRING 2007***

# **BIOLOGICAL RULES**

**Seminar in Ecology: (Biology 615C, 3 Units)  
Tuesdays 6–9 PM**

*It is human nature to search for patterns in the natural world. Biological rules are recurring patterns in nature that often transcend time, space, and levels of biological organization. They can provide general explanations for a diversity of biological phenomena, making them both powerful and controversial. We will examine these patterns and study the assumptions and mechanisms underlying them via readings, discussions, and student presentations.*

### **Format**

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After a brief introduction (week 1), we will discuss general readings for 3–4 weeks. Thereafter, students will give seminar-style presentations that could:

- (1) propose a new rule;
- (2) describe a novel application of an existing rule;
- (3) critique the assumptions of a new or existing rule;
- (4) propose a novel mechanism for a new or existing rule;
- (5) synthesize ideas or information pertaining to one or more existing rules.

The expectation is to produce a novel and possibly publishable product (i.e., move beyond the usual book-report-style presentation). Grades will be based on participation and the content and effectiveness of the presentation.

### **Prerequisites**

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- Graduate status
- Biology 691 (Proseminar)
- At least one 400-level Biology course

### **Instructor**

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### **A Few of the Rules We May Explore**

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|---------------------------|----------------|-------------------|-------------------------|
| • Allen's Rule            | • Brown's Rule | • Gloger's Rule   | • Rapoport's Rule       |
| • Bateman's Principle     | • Cope's Rule  | • Hamilton's Rule | • Rensch's Rule         |
| • Bergmann's Rule         | • Dollo's Law  | • Island Rule     | • Temperature-Size Rule |
| • Biological Scaling Laws | • Egg Rule     | • Jordan's Rule   | • Thorson's Rule        |