

Theoretical Ecology, BIOR30, 7.5 credits (and TEK275 Teoretisk evolutionsbiologi)

Autumn 2011

Dates: 29 Nov 2011 - 13 Jan 2012

Locality: Raggmossen, Ecology Building

Literature: Ted Case, "An Illustrated Guide to Theoretical Ecology", Oxford.
Handouts

Examination: Individual projects throughout the course. Oral presentations.

Photo copying: Copies for the course can be made in the copying room at the ground floor. A copying card is available next to the machines. Code from JR

Teachers:

JR: Jörgen Ripa, head teacher, Evolutionary Ecology, phone 2223770, internal 23770, room A223, email: Jorgen.Ripa@biol.lu.se

AB: Anders Brodin, Evolutionary Ecology (anders.brodin@biol.lu.se)

AH: Anders Hedenström, Evolutionary Ecology (anders.hedenstrom@biol.lu.se)

MP: Mikael Pontarp, Evolutionary Ecology (mikael.pontarp@biol.lu.se)

Preliminary Schedule

L = lecture, E = exercise, S = Literature seminar.

I. Population Ecology

Tue 29 Nov

9.00 - 10.00 Introduction, Single population dynamics (L) JR *Case, ch. 1,3-6*

10.00 - 16.00 *Independent studies of Case 1-6*

Wed 30 Nov

9.00 - 10.00 *Independent studies of Case 1-6*

10.00 - 12.00 Single population dynamics (S) MP

Case, 1,3-6

13.00 - 15.00 Spatial and Multispecies Dynamics (L) JR

Case 2, 10-16

Thu 1 Dec

All day Project, Spatial and Multispecies Dynamics

Fri 2 Dec

All day Project, Spatial and Multispecies Dynamics

Mon 5 Dec

All day Project, Spatial and Multispecies Dynamics

Tue 6 Dec

All day Project, Spatial and Multispecies Dynamics

Wed 7 Dec

All day Project, Spatial and Multispecies Dynamics

Thu 8 Dec

10.00 - 12.00 Project presentations. JR

II. Introduction to Natural Selection

Fri 9 Dec

10.00 - 12.00 Natural Selection (L) JR *handouts*

13.00 - 16.00 Natural Selection (E) MP

III. Evolution as an optimizing process

Mon 12 Dec

10.00 - 12.00 Evolution as an optimizing process (L) AH+AB *handouts*

13.00 - 16.00 Project, Evolution as an Optimizing Process

Tue 13 Dec

All day Project, Evolution as an Optimizing Process

Wed 14 Dec

All day Project, Evolution as an Optimizing Process

Thu 15 Dec

9 -12 Project, Evolution as an Optimizing Process

Fri 16 Dec

All day Project, Evolution as an Optimizing Process

Mon 19 Dec

13.00 - 15.00 Project presentations and discussion AB/AH

Tue 20 Dec

10.00 - 12.00 Evolutionary game theory and speciation (L) JR *handouts*

13 - 16 Project, Evolutionary game theory and speciation

Wed 21 Dec

All day Project, Evolutionary game theory and speciation

CHRISTMAS

IV. Frequency and density dependent selection

Mon 9 Jan

All day Project, Evolutionary game theory and speciation

Tue 10 Jan

All day Project, Evolutionary game theory and speciation

Wed 11 Jan

All day Project, Evolutionary game theory and speciation

Thu 12 Jan

10.00 - 12.00 Project presentations and discussion JR