

Schedule for GEOG 501 Environmental Systems Modelling Fall 2011

Date	Lecture *	Workshop *	Assignments	Reading
	08:35 – 09:25	09:40 – 11:25		
Sept. 06 Wk 1	<i>Introduction to course & systems model modelling</i>	Introduction to Stella		Course Outline Surf Stella Menus Chp Preface & 1 & 2
Sept. 13 Wk 2	<i>What is a model? Why model?</i>	Basic building blocks: Stocks & flows & Numerical Simulation	Assignment 1 Due Sept 20	Chp 3 & 4 Jackson et al. Bioscience 2000.
Sept. 20 Wk 3	Working with a systems model: Mono Lake		Assignment 2 Due Sept 27	Chp 5 & 13
Sept. 27 Wk 4	Equilibrium diagrams and S shape curve		Assignment 3 Due Oct 04	Chp 6, 7 & 8
Oct. 04 Wk 5	Casual Loops		Assignment 4 Due Oct 11	Chp 9,10,11 & 12
Oct. 11 Wk 6	Material flows & step size Applications: DDT; Salmon Smolts; Tucannon Salmon; Easter Island		Assignment 5 Due Oct 18	Chp 15 & 16
Oct. 18 Wk7	<i>Step to modelling: what makes a good model</i>	Material Flow II	Assignment 6 Due Oct 25	Chp 13, 14 & 17 Aber Bull. Ecol. Soc. Amer. 1997 Blanco (2010) http://www.scitopics.com/Seven_steps_to_create_ecological_models_for_natural_resource_management.html
Oct. 25	Dynamical Systems I:		Model Project	Chp 18 & 19

Wk 8	flowers, time delays, widgets & real estate		Handout <i>Model objectives due Nov 01</i>	Aumann, Ecol. Mod., 2007 Van Ness & Scheffer, Ecol. Mod., 2005
Nov. 01 Wk 9	<i>Model evaluation</i>	Dynamical Systems II: Predator – Prey models	Assignment 7 <i>Due Nov 08</i> <i>Model project problem & objectives due today at 8:30 am</i>	Chp 20 Rykiel Ecol Model. 1996 Rastetter Bioscience 1996 Scheffer & Beets Hydrobiologia 1994 Oreskes, Science, 1994
Nov. 08 Wk 10	Dynamical System III: Kaibab Plateau cont'd		Assignment 8 <i>Due Nov 15</i>	Chp 21, 22 & 23
Nov. 15 Wk 11	Project workshop I			Chp 24
Nov. 22 Wk 12	Project workshop II			
Nov. 29 Wk 13	Project workshop III			
Dec. 06 24:00	<i>Model Project paper due</i>			

* When continuous it means there is no formal lecture but we will be working on a series of models in workshops