

June 27, 2014

Schedule for GEOG 501 Modelling Environmental Systems Fall 2014

Date	Lecture *	Workshop *	Assignments @	Reading
	08:35 – 09:25	09:35 – 11:25		
Sept. 02 Wk 1	<i>Introduction to course & systems modelling</i>	Introduction to Stella		Course Outline Surf Stella Menus Chp Preface & 1 & 2
Sept. 09 Wk 2	<i>What is a model? Why model?</i>	Basic building blocks: Stocks & flows & Numerical Simulation	Assignment 1 <i>Due Sept 16</i>	Chp 3 & 4 Jackson et al. <u>Bioscience</u> 2000.
Sept. 16 Wk 3	Working with a systems model: Mono Lake		Assignment 2 <i>Due Sept 23</i>	Chp 5 & 13
Sept. 23 Wk 4	Equilibrium diagrams and S shape curve		Assignment 3 <i>Due Sept 30</i>	Chp 6, 7 & 8
Sept. 30 Wk 5	Casual Loops		Assignment 4 <i>Due Oct 07</i>	Chp 9,10,11 & 12
Oct. 07 Wk 6	Material flows & step size Applications: DDT; epidemics, salmon smolts; Tucannon salmon; Easter Island		Assignment 5 <i>Due Oct 21</i> <i>Note: given 2 weeks because of Thanksgiving weekend October 11-13 but it means 2 things due on Oct. 21!</i>	Chp 15 & 16

Oct. 14 Wk 7	<i>Step to modelling: what makes a good model</i>	Material Flow II	Model Project Handout Model objectives due Oct 21	Chp 13, 14 & 17 Aber <u>Bull. Ecol. Soc. Amer.</u> 1997 Blanco (2010)
Oct. 21 Wk 8	Dynamical Systems I: flowers, time delays, widgets & real estate		Assignment 6 Due Oct 28 Model project problem & objectives due today by 08:30	Chp 18 & 19 Aumann, <u>Ecol. Mod.</u> , 2007 Van Ness & Scheffer, <u>Ecol. Mod.</u> , 2005
Oct. 28 Wk 9	<i>Model evaluation</i>	Dynamical Systems II: Predator – Prey models	Assignment 7 Due Nov 04	Chp 20 Rykiel <u>Ecol Model.</u> 1996; Rastetter <u>Bioscience</u> 1996 Scheffer & Beets <u>Hydrobiologia</u> 1994; Oreskes, <u>Science</u> , 1994
Nov. 04 Wk 10	Dynamical System III: Kaibab Plateau cont'd		Assignment 8 Due Nov 11	Chp 21, 22 & 23
Nov. 11 Wk 11	Project workshop I			Chp 24
Nov. 18 Wk 12	Project workshop II			
Nov. 25 Wk 13	Project workshop III			
Dec. 02 Wk 14	<i>Extra workshop</i>			
Dec. 05	Model Project paper due^{&}		Due by 17:00	

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

@ Assignments are due by the beginning of class. Note the final project is due by 17:00. All assignments should be handed in electronically to the Teaching Assistant or to the assignment dropbox on myCourses.
& Final projects should be submitted to Professor Roulet electronically (nigel.roulet@mcgill.ca) by 17:00.