Population Viability Analysis I: Concepts and Procedures

(CSP4110), 12 - 16 July 2010

Course Agenda

Monday	**Monday in Room 109, Instructional East**
8:00 AM	Welcome, Administration, Overview of Course Topics, and Introduction to the Computer Lab Goals and Objectives of the course and curriculum – Dr. Joe W. Witt, USFWS, National Conservation Training Center
8:15 AM	Course Introduction, Dr. Steve Beissinger and Dr. Zach Peery, University of California at Berkeley
8:30 AM	PVA and conservation paradigms
10:00 AM	Decision Analysis and BIDE
11:00 AM	Count-based approaches to PVA
11:30 AM	**Exercise:** calculating stochastic growth rate
12:00 noon	Lunch
1:00 PM	Incorporating stochasticity
1:30 PM	***Exercise***: Stochastic count-based PVA
2:00 PM	
2:30 PM	More realistic PVAs
3:30 PM	***Exercise***: Density Dependence
4:30 PM	Choosing among possible models
7 :00 PM	**Optional session on Regression Techniques in R**

Tuesday

8:00 AM Maximum Likelihood Estimation

8:30 AM - - - ***Exercise***: AIC

9:00 AM Estimating Variance Components

10:00 AM Comprehensive count-based PVA

11:00 AM Deterministic Matrix Models

11:30 AM **Exercise: Population Projection**

12:00 noon Lunch

1:00 PM Life Cycle Diagrams and Matrices

1:30 PM **Exercise:** Life cycle diagrams and matrices

2:00 PM Matrix calculations: Lambda, SAD, and RV

2:30 PM - - - ***Exercise***: MATLAB matrices

3:30 PM Examples of Matrix use

4:00 PM Matrix sensitivity analysis

4:30 PM Exercise: Matlab II - Matrix sensitivity

7:00 PM **Optional session on Matrix Techniques in R**

Wednesday

8:00 AM Use of Sensitivity Analysis

8:30 AM Sampling vs. process variation

9:00 AM **Exercise: variance components**

10:00 AM Matrix wrap-up

11:00 AM Stochastic Structured PVA

12:00 noon Lunch

1:00 PM - - - ***Exercise***: Simple PVA

2:00 PM More Realistic PVAs

2:30 PM - - - ***Exercise***: Realistic PVA

4:00 PM Sensitivity analysis for PVA

4:30 PM Estimating vital rates

Thursday

8:00 AM Metapopulations

9:00 AM **Exercise: Build a SPOM**

10:00 AM PVA in context

10:30 AM Discuss a PVA paper

11:00 AM Synthesis exercise

12:00 noon Lunch

1:00 PM Group work synthesis exercise

2:00 PM Group work synthesis exercise

3:00 PM Group work synthesis exercise

4:00 PM Group work synthesis exercise

Friday

8:00 AM Group Prep.

9:00 AM Group Reports

11:00 AM Wrap up

11:30 AM Distribution of certificates and course evaluation and class discussion about curriculum and use in the field – Joe Witt