Schedule, Spring 2019

NRES 470

Please check for updates frequently!

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| Week | Dates | Topic | Text.Readings | Notes |
| Week 1 | 1/22/2019 | LECTURE 1: Course overview; Intro to Systems Thinking | Gotelli Chapter 1 | TWS NV Chapter science symposium! |
|  | 1/24/2019 | LECTURE 2: Intro to Population Ecology; Exponential growth | BCTD Chapter 1 |  |
|  | 1/25/2019 | LAB: Introduction to population modeling in Excel, InsightMaker, and R |  |  |
| Week 2 | 1/29/2019 | LECTURE 1: Thomas Malthus |  |  |
|  | 1/31/2019 | LECTURE 2: Density-dependent growth | Gotelli Chapter 2 |  |
|  | 2/1/2019 | LAB: Density-dependent populations in InsightMaker; maximum sustainable yield (MSY) and more |  |  |
| Week 3 | 2/5/2019 | LECTURE 1: Density-dependent growth | BCTD Chapter 2 (skim) | Away TWS |
|  | 2/7/2019 | LECTURE 1: Passenger pigeon/Allee Effect |  | Away TWS |
|  | 2/8/2019 | NO LAB (instructor is away) |  | Away TWS/MA |
| Week 4 | 2/12/2019 | LECTURE 1: Age-structured populations | Gotelli Chapter 3 |  |
|  | 2/14/2019 | LECTURE 2: Age-structured populations |  |  |
|  | 2/15/2019 | LAB: Age-structured populations and stochasticity in InsightMaker |  |  |
| Week 5 | 2/19/2019 | LECTURE 1: Matrix population models | [Heppell 1998](heppell1.pdf) |  |
|  | 2/21/2019 | LECTURE 2: MIDTERM #1 |  |  |
|  | 2/22/2019 | LAB: Matrix population models in R and InsightMaker |  |  |
| Week 6 | 2/26/2019 | LECTURE 1: Matrix population models |  |  |
|  | 2/28/2019 | LECTURE 2: Final projects etc. |  |  |
|  | 3/1/2019 | LAB: Matrix models & work on group PVA projects (proposals due) |  |  |
| Week 7 | 3/5/2019 | LECTURE 1: Stochasticity and Uncertainty | [Regan 2002](Regan_2002.pdf) |  |
|  | 3/7/2019 | LECTURE 2: Small population paradigm | [Beissinger and Westphal 1998](beissinger1.pdf) |  |
|  | 3/8/2019 | LAB: Stochasticity and uncertainty |  |  |
| Week 8 | 3/12/2019 | LECTURE 1: Individual based models | BCTD Chapter 10 |  |
|  | 3/14/2019 | LECTURE 2: Individual based models /Declining pop. Paradigm |  |  |
|  | 3/15/2019 | LAB: Work on group PVA projects |  |  |
| Week 9 | 3/19/2019 | SPRING BREAK |  |  |
|  | 3/21/2019 | “ |  |  |
|  | 3/22/2019 | “ |  |  |
| Week 10 | 3/26/2019 | LECTURE 1: Declining population paradigm | [Caughley 1988](caughley1.pdf) |  |
|  | 3/28/2019 | LECTURE 2: Population Viability Analysis (PVA) |  |  |
|  | 3/29/2019 | LAB: Final projects (PVA models due next week) |  |  |
| Week 11 | 4/2/2019 | LECTURE 1: Metapopulations | Gotelli Chapter 4 |  |
|  | 4/4/2019 | LECTURE 2: Source-sink dynamics | Optional: [Griffin et al](griffin1.pdf) |  |
|  | 4/5/2019 | LAB: Metapopulation modeling in InsightMaker (PVA models due) |  |  |
| Week 12 | 4/9/2019 | LECTURE 1: Parameter estimation! | [Amstrup et al Chapter 1](amstrup1.pdf) | Away: SERDP IPR |
|  | 4/11/2019 | LECTURE 2: MIDTERM #2 |  | Away: SERDP IPR |
|  | 4/12/2019 | LAB: Parameter estimation: mark-recapture data |  |  |
| Week 13 | 4/16/2019 | LECTURE 1: Galapagos case study | Optional: [Gibbs et all 2014](gibbs1.pdf) |  |
|  | 4/18/2019 | LECTURE 2: Galapagos case study |  |  |
|  | 4/19/2019 | LAB: Peer review / Work on group PVA projects |  |  |
| Week 14 | 4/23/2019 | LECTURE 1: Species interactions: competition! | Gotelli Chapter 5 |  |
|  | 4/25/2019 | LECTURE 2: Species interactions: competition! (draft papers due) |  |  |
|  | 4/26/2019 | LAB: STUDENT PRESENTATIONS |  |  |
| Week 15 | 4/30/2019 | LECTURE 1: Species interactions: competition! |  |  |
|  | 5/2/2019 | LECTURE 2: Predator-prey | Gotelli Chapter 6 |  |
|  | 5/3/2019 | LAB: STUDENT PRESENTATIONS |  |  |
| Week 16 | 5/7/2019 | LECTURE 1: final class review (and any remaining student presentation) |  |  |
| Week 17 | 5/14/2019 | FINAL EXAM (9:50 to 11:50am) |  |  |
|  | 5/15/2019 | FINAL PAPERS DUE (last day of finals) |  |  |