Schedule, Spring 2021

NRES 470/670

Please check for updates frequently!

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| Week | Dates | Topic | Readings |
| Week 1 | 1/25/2021 | LECTURE: Course overview; Intro to Systems Thinking | BCTD Chapter 1 |
|  | 1/27/2021 | LECTURE: Intro to Population Ecology; Exponential growth | Gotelli Chapter 1 |
|  | 1/29/2021 | LAB 1: Introduction to population modeling in Excel, InsightMaker, and R | Gotelli Chapter 1 |
| Week 2 | 2/1/2021 | LECTURE: Malthus and exponential growth |  |
|  | 2/3/2021 | LECTURE: Density-dependent growth | Gotelli Chapter 2 |
|  | 2/5/2021 | LAB 1 (cont’d) |  |
| Week 3 | 2/8/2021 | LECTURE: Density-dependent growth | Gotelli Chapter 2 |
|  | 2/10/2021 | LECTURE: Passenger pigeon/Allee Effect |  |
|  | 2/12/2021 | LAB 2: Density-dependent populations in InsightMaker; maximum sustainable yield (MSY) and more | BCTD Chapter 2 (skim) |
| Week 4 | 2/15/2021 | NO CLASS: President’s Day |  |
|  | 2/17/2021 | LECTURE: Age-structured populations | Gotelli Chapter 3 |
|  | 2/19/2021 | LAB 3: Age-structured populations in Excel and InsightMaker |  |
| Week 5 | 2/22/2021 | LECTURE: Matrix population models | [Heppell 1998](heppell1.pdf) |
|  | 2/24/2021 | LECTURE: Matrix population models | Gotelli Chapter 3 |
|  | 2/26/2021 | Work on PVA proposals |  |
| Week 6 | 3/1/2021 | LECTURE: Matrix population models | Gotelli Chapter 3 |
|  | 3/3/2021 | LECTURE: Stochasticity and uncertainty | [Regan 2002](Regan_2002.pdf) |
|  | 3/5/2021 | LAB 4: Matrix population models in R and InsightMaker |  |
| Week 7 | 3/8/2021 | LECTURE: Stochasticity and uncertainty |  |
|  | 3/10/2021 | NO CLASS: READING DAY |  |
|  | 3/12/2021 | PVA proposals (proposals due) |  |
| Week 8 | 3/15/2021 | MIDTERM #1 |  |
|  | 3/17/2021 | LECTURE: Stochasticity and uncertainty |  |
|  | 3/19/2021 | Work on group PVA projects (proposal meetings) |  |
| Week 9 | 3/22/2021 | LECTURE: Small population paradigm | [Caughley 1994](caughley1.pdf) |
|  | 3/24/2021 | NO CLASS (No Instruction Day) |  |
|  | 3/26/2021 | LAB 5: Stochasticity and uncertainty |  |
| Week 10 | 3/29/2021 | LECTURE: Declining population paradigm | [Caughley 1994](caughley1.pdf) |
|  | 3/31/2021 | LECTURE: PVA! | [Beissinger and Westphal 1998](beissinger1.pdf) |
|  | 4/2/2021 | Final projects (PVA models due next week) |  |
| Week 11 | 4/5/2021 | LECTURE: Metapopulations | Gotelli Chapter 4 |
|  | 4/7/2021 | LECTURE: Source-sink dynamics | [Griffin et al](griffin1.pdf) |
|  | 4/9/2021 | LAB 6: Metapopulation modeling in InsightMaker (PVA models due) |  |
| Week 12 | 4/12/2021 | LECTURE: Parameter estimation | [Amstrup et al Chapter 1](amstrup1.pdf) |
|  | 4/14/2021 | LECTURE: MIDTERM #2 |  |
|  | 4/16/2021 | LAB 7 (optional): Parameter estimation: mark-recapture data |  |
| Week 13 | 4/19/2021 | LECTURE: Species interactions: competition | Gotelli Chapter 5 |
|  | 4/21/2021 | NO CLASS: READING DAY |  |
|  | 4/23/2021 | LAB: STUDENT PRESENTATIONS AND PEER REVIEW |  |
| Week 14 | 4/26/2021 | LECTURE: Species interactions: competition |  |
|  | 4/28/2021 | LECTURE: Species interactions: predator-prey (final project: complete drafts due) | Gotelli Chapter 6 |
|  | 4/30/2021 | LAB: STUDENT PRESENTATIONS |  |
| Week 15 | 5/3/2021 | LECTURE: Final Class Review |  |
|  | 5/5/2021 | NO CLASS: Prep Day |  |
|  | 5/7/2021 | FINAL EXAM (9:50 to 11:50am) |  |
| Week 16 | 5/12/2021 | FINAL PAPERS DUE (last day of finals) |  |