

BISC-838, Population Dynamics, Spring 2021

Lecture: Mon,Thurs,Fri 09:00-11:00 Remote

Workshops: Mon,Thurs,Fri 15:00-16:00 Remote

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Grade Breakdown:

| | | |
|------------------------------|-------------------|-----|
| R workshops | Due Feb. 1, 8, 15 | 30% |
| Assignment 1 | Due Feb. 7 | 20% |
| Assignment 2 (Final project) | Due Feb. 19 | 30% |
| Presentation | Feb. 11/12 | 20% |

Course Schedule *Note: this outline is tentative and will be updated as we progress.*

| Dates | Content | Workshop |
|--------|--|--|
| Jan 25 | Introduction Exponential growth | Intro to R <i>Due Feb 1</i> |
| Jan 28 | Density-dependence Model construction | Graphics <i>Due Feb 1</i> |
| Jan 29 | Analyses: graphs Island model, Matrix algebra | Numerical analysis <i>Due Feb 8</i> |
| Feb 1 | Matrix algebra, cont Demography | Matrices <i>Due Feb 8</i> |
| Feb 4 | Probability distributions Stochasticity | Demography <i>Due Feb 15</i> |
| Feb 5 | Individual-based models | Stochasticity <i>Due Feb 15</i> |
| Feb 8 | Individual-based models | Individual-based models <i>Due Feb 15</i> |
| Feb 11 | Presentations | |
| Feb 12 | Presentations | |

Workshop submissions: Workshops are due in three sets (by midnight on specified date). Please combine work from all workshops due on a given date into a single R script with the filename, for example, “LASTNAME_FIRSTNAME_WORKSHOP_1_2.R” and then upload it in canvas. I will be running these scripts on my own machine, so it is important that the code works! Workshops will be largely graded for completion (e.g., did you do everything?), however, points will be deducted if code is really unwieldy or difficult to understand. Remember to add comments throughout!