Extra credit options

NRES 470/670

Spring 2020

You may submit up to four extra credit essays – a maximum of two of each of the options listed below...

Extra Credit Option 1 – Journal Article Response

Total points possible: 10

Due at the end of finals period

Objectives:
1. Connect the content of this course with active research areas in the expanding, dynamic field of population ecology.
2. Engage with original scientific literature in this field of study.

Select a *peer-reviewed journal article* on a topic *relevant to population ecology.*

- The article should develop a population model to address a conservation or management question - The article could present newly collected data that were then analyzed to parameterize a population model, *OR* could present an analysis of already existing data to develop a different population model than has already been developed for the species/system. - For an example of the type of article you should look for (PDF is in the "Files" folder on WebCampus and linked to the assignment page):

  Crowder, Larry B., Crouse, D., Heppell, S., and Martin, T. 1994. Predicting the impact of turtle excluder devices on loggerhead sea turtle populations. Ecological Applications 4(3):437–445.

Write a response to the article you select:

1. No more than 2 pages, double-spaced, size 12 font.
2. Use essay format: write in complete sentences and coherent paragraphs.
3. Three main elements to write about:
   - Summarize **main methods and results**
   - Identify **how the research was applied** to a particular conservation or management issue, and describe the relationship between the research and the contents of this course.
   - Provide **your personal response** to the article - why did you choose to read it, what did you like about it, and what did you learn?

Upload your written response and a PDF of the journal article to WebCampus by May 9.

Extra Credit Option #2 – Population Ecology Talk

Total points possible: 10

Due at the end of finals period

Objectives:

1. Augment the course by learning directly from other experts in the field of population ecology.
2. Engage with researchers and/or methods of scientific communication beyond textbooks and peer-reviewed literature to gain a better understanding of applications of population ecology to conservation or management issues.

Attend (in-person or online) a **talk or seminar** on a topic *relevant to population ecology.*

- The talk, presentation, or seminar should directly discuss population model(s) and the application to a conservation or management question
  - The list of suggested online or in-person talks to attend will continuously be updated throughout the semester on the Discussion thread on WebCampus.
  - If you discover a talk you'd like to attend that is not on the list, please obtain prior approval to make sure it will be accepted for this assignment (and let your fellow classmates know about the opportunity on WebCampus!).
  - The talk/presentation should be a minimum of 20 min long.

Write a response to the talk you attended:

1. No more than 2 pages, double-spaced, size 12 font.
2. Use essay format: write in complete sentences and coherent paragraphs.
3. Three main facets to write about:
   - What themes/models/dynamics were discussed that are **directly related** to what you've learned about in class?
   - What was the **conservation or management issue** that the researcher(s) addressed? What surprising or novel findings did the researcher(s) present?
   - Provide **your personal response** to the talk - why did you choose to attend, and what did you like about it? Was there anything that was unclear or that you would like to learn more about?

Upload your written response to WebCampus by May 9.

Grading Rubric, option 1:

Criteria	Details
Talk selection	Provide complete information about the (1) Topic relevant to course
Concepts relevant to course	One or two paragraphs: (1) Identify specific concepts discussed in (2) How were these concepts presented in · What was familiar about how th · What, if anything, did you learn (3) Identify one concept in the talk that
Describe application of research/ information to conserve-ation or man-agement	One or two paragraphs

Criteria	Details
	(1) What management or conservation pr
	· Explain the management or cons
	· Summarize how the researcher a
	(2) Do you think the researcher's approac
	(3) Are you satisfied that the researcher(
Personal response	One or two paragraphs
	(1) What did you find particularly effecti
	· For example: was the researcher
	(2) If you had to summarize the talk's "t
	(3) If you were to give a similar presentat
	(4) What did you find particularly interes
#### Grading Rubric, option 2:	

Criteria	Details
Talk selection	Provide complete information about the
	(1) Topic relevant to course
Concepts relevant to course	One or two paragraphs:
	(1) Identify specific concepts discussed in
	(2) How were these concepts presented in
	· What was familiar about how th
	· What, if anything, did you learn
	(3) Identify one concept in the talk that
Describe application of research/ information to conserve-ation or man-agement	One or two paragraphs
	(1) What management or conservation pr
	· Explain the management or cons
	· Summarize how the researcher a
	(2) Do you think the researcher's approac
	(3) Are you satisfied that the researcher(
Personal response	One or two paragraphs
	(1) What did you find particularly effecti
	· For example: was the researcher
	(2) If you had to summarize the talk's "t
	(3) If you were to give a similar presentat
	(4) What did you find particularly interes

Suggestions for how to search online for relevant peer-reviewed journal articles:

Note: A "peer-reviewed journal article" is an article that has been reviewed by experts in the topic area as part of the journal's formal editorial and publication process. To determine whether your article is "peer-reviewed", go to the Ulrichs database (available through UNR's Knowledge Center: http://ulrichsweb.serialssolutions.com/) and search for the journal's name in the search box. On the results page, click on the title of your journal. In the "Basic Description" table that appears, look for the "Refereed" field – if "Yes", that means the journal is peer-reviewed.

Through UNR's Knowledge Center:

- Start on the homepage: https://library.unr.edu/
- Click the tab "Databases" in the "OneSearch" widget, or go here directly: https://guides.library.unr.edu/az.php
- Navigate to the "Web of Science" database.

- Use the search box to find articles. Through Google Scholar:
- Start here: https://scholar.google.com/
- Use the search box to find articles

Search strings to consider:

population ecology AND [taxon or genus or species name]
demographic model AND [taxon or genus or species name]
population growth AND conservation
population dynamics AND management
population model AND harvest
stage-structured population (The " *" acts as a wildcard, meaning the search will return results with either "population" or "populations". This works in Web of Science, but won't do anything in Google Scholar because Google Scholar automatically searches for results containing the same root but different word endings.)*
metapopulation dynamics AND (endangered species OR "species of concern") predator-prey dynamics