AS.420.611.81FA18: Principles and Methods of Ecology

Advanced Academic Programs
Zanvyl Krieger School of Arts and Sciences
Johns Hopkins University
Baltimore, Maryland, USA

Fall 2018

Section 1: Instructor, Course Information, and Objectives

Instructor Information
Instructor: Jorge A. Santiago-Blay, Ph.D.
Email Address: blayj@jhu.edu
Office Hours: via email

Course Description
This course examines the relationship between organisms and their biotic and abiotic environments at three levels of biological hierarchy: individual organism, population, and community. Population characteristics, models of population dynamics, and the effect of ecological interactions on population regulation are discussed in detail. The structure and function of natural and man-made communities and the impact disturbances have on community structure are also examined. Students are led to appreciate the importance of ecology in solving environmental problems.

Prerequisites
420.301 - Quantitative Methods - This prerequisite course provides the necessary background in mathematics for students who do not have sufficient undergraduate course work in calculus and statistics. Students who receive a provisional admission because of math deficiency can opt to take the mathematics assessment test. If the student earns a score of 80% or better, then s/he is not required to take the course. In this course, students acquire quantitative skills and an understanding of mathematical principles fundamental to environmental sciences, and necessary for evaluating the implications of policy measures. Topics include probability and statistics, systems of equations, analytical geometry, and basic concepts of calculus. Problem sets, interpretation of data, and applications to everyday problems help students appreciate the usefulness of quantitative methods. Offered online twice a year.

420.302 - Chemistry of Natural Processes - This course provides students with a basic understanding of the fundamentals of chemistry, of Earth’s interrelated chemical systems, and of how to manipulate and interpret chemical data. Topics include molecules and chemical bonding, states of matter, thermodynamics, and kinetics. Through a series of exercises, students apply chemistry principles to solve real-world environmental problems. Prerequisite: Students are urged to take 420.301 Quantitative Methods for Environmental Sciences before enrolling in this course. Offered online only, one to two times annually.
Course Learning Goals & Learning Objectives

By the end of this course, you will be able to:

1. Describe how interactions of organisms with their environment and other organisms give rise to patterns of species distribution and abundance.

2. Describe biotic and abiotic factors affecting ecological processes at the individual, community and ecosystem levels.

3. Explain the major processes influencing biodiversity in terrestrial and aquatic ecosystems.

4. Define basic principles of ecology including population growth, ecological interactions, succession, and evolutionary change, and make predictions based on these principles.

5. Discuss how the function of local and global ecosystems is being altered by human activity, and critique alternative strategies for minimizing human impact on biogeochemical cycles.

6. Conduct basic field and analytical techniques in ecology such as habitat sampling and physiochemical characterization of populations and communities.

7. Demonstrate familiarity with common approaches for statistical analysis and presentation of ecological data.

8. Apply ecological principles to environmental challenges and conservation concerns.

Section 2: Course Materials

Textbook

Other Readings
All other readings will be posted on the online classroom with the support from JHU Library Reserves. To access the eReserves, simply click on the eReserves tab in Blackboard.

Other equipment / software/ websites / online resources
1. Several “hands on exercises and questions will be assigned from the site of our former textbook, Ecology, authored by Bowman, et al. (2017).
2. Also, we will complete several of the SimBio Virtual Labs using a program called SimUText.

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1 Objectives tend to be more short term and measurable; goals tend to be more long term and less measurable.
Our SimUText will include the following modules:
   a. Niche Wars
   b. Understanding Population Growth Models
   c. Isle Royale
   d. Barnacle Zone
   e. Top Down Control
   f. Keystone Predator
   g. Intermediate Disturbance Hypothesis
   h. Patchy Prairies

Labs cost is $6/each/student, which means the total cost for the seven labs selected it is $42/student. You will purchase your subscription and download the software using SimBio’s Student Portal. To subscribe to your SimUText, you will need to supply your email address as a user name, your name and student ID, and select a password. The bookstore does not offer a SimUText Redemption Code so just click the Continue button. Once you have registered and purchased your subscription, you can download the software from this site.

1. It is important that you review the information below before you subscribe to the SimUText for Principles and Methods of Ecology at Johns Hopkins University. To avoid potential problems, do not wait until the last minute.

2. CHECK YOUR TECH! Visit https://simutext.zendesk.com/hc/en-us/categories/200170134-Check-Your-Tech- to confirm that the SimUText application will work on your computer, and/or to explore your options if there is a problem.

3. If you purchased a SimUText Voucher from your bookstore, be sure to have it with you when subscribing, as you will need to enter your voucher code.

4. When you are ready to subscribe and download installers, follow this link to initiate the process: https://www.simutext.com/student/register.html#/key/UnnX-54b5-pazX-du7m-vnrV

5. You will need to install the SimUText application onto your computer to complete your SimBio assignments. You can download the installers any time by logging into the online SimUText Student Portal at https://www.simutext.com/student.

6. Save this email! Should you encounter problems, you may need your course-specific Access Key. It is: UnSG-jf47-cHXf-nEnS-VynG

7. Problems or questions? Visit SimUText Support: http://simbio.com/support/simutext. Students are more than welcomed to visit this site and ask specific questions. Expect answers within 24 hours. Again, do not wait until the last day to ask questions!

Other specific technology requirements and skills for this course
1. You will need access to a spreadsheet such as MS Excel, Apple Numbers, or Google Docs as
that will facilitate basic statistical analysis.

2. Learning online requires some basic knowledge of computer technology. At a minimum, you need to be able to:

   a. Navigate in and use Blackboard; the Blackboard Student Orientation course on your “My Institution” page.

   b. Create and save MS Word documents; see MS Word tutorials for PC users (all versions); Word Help for Mac users.

**Section 3: Course Overview and Learning Goals**

One of the simplest definitions of ecology is “the study of the abundance and distribution of organisms.” In this course, we will explore the physical and biological features and interactions that determine densities and distributions. A central Learning Goal of ecology is to try to reduce the complexity of the natural world to an oversimplified, yet hopefully still useful, set of principles. This course will provide an understanding of ecological theory and we will critically examine some real-world applications of such theories. Global climate change, overfishing, habitat loss, altered nutrient cycles, and the spread of invasive species are among the world’s pressing global environmental issues. Solutions to these problems are complex, but firmly rooted in the fundamental tenets of ecological theory. Ultimately, students should be able to relate ecological principles to problems of habitat and species conservation, resource and waste management, pest control, and areas of environmental planning.

Each week, you will also have assignments to complete on the online classroom, including quizzes, virtual laboratories, at home live laboratory exercises, and discussion activities. The quizzes will involve multiple choice and short answer questions, and they are designed to get you thinking more deeply about key concepts in the readings.

**What is ecology?** Ecology, as a natural science attempts to explain, interpret and predict nature’s phenomena. Such work often begins with observations obtain in the field which lead to further investigation. As an online class, we will attempt to incorporate the field aspect through virtual laboratories and “at home” data collection as part of an independent research project. Other activities will involve sharing observations and opinions with other students online.

**Dates & Topics, Readings, and Assessments & Due Dates**

A tentative schedule of dates, topics, associated readings assessments, and due dates can be found in Section 7. Topics may be modified by the me with advanced notice of no less than three days. Should that happen, I will communicate via the online classroom.

**What to do next?**

1. Carefully review the remaining sections of the syllabus section of this course before beginning
Week 1 activities, which are located in the Lessons folder in your online classroom.

2. Once you feel that you are ready to dive into the first week’s activities, click on the Lessons button on the left-side navigation. Then, click on Module 1 and begin with the Introduction and Objectives.

What to Expect in this Course
This course consists of 13 full weeks (Monday – Sunday) and two smaller weeks (“half weeks”, week 1, Wednesday to Sunday and week 15 (the last), Monday to Tuesday. There are no assignments during Thanksgiving week November 19-25. Please review the course syllabus thoroughly to learn about specific course outcomes and requirements.

Each week, you will complete readings that may include videos, multimedia presentations, web-based resources, and articles from professional journals. A reading may be integrated within an activity during the week or provide some key information to assist your learning. In this course, you will also experience online learning activities, which include discussion boards, virtual simulations, group work, and online multimedia presentations.

Section 4: Assessments and Grading Policy
Assessments
Your final grade is calculated as a weighted average of the total number of points (see below for details). Specific due dates will be placed in the lesson modules and in the table on Section 7 and in our electronic classroom.

Grading Policy:
Your cumulative average will be based on the following weighted averages:

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Points</th>
<th>Percentage Weight</th>
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<tbody>
<tr>
<td>Twenty-four (24) Chapter Quizzes – Generally due on Thursdays. 10% each</td>
<td>240</td>
<td>32.79%</td>
</tr>
<tr>
<td>Twenty-eight (28) Discussions – Generally due on Sundays. 5% each</td>
<td>140</td>
<td>19.13%</td>
</tr>
<tr>
<td>Eight (8) SimBio Laboratories – Generally due on Sundays. 10% each</td>
<td>80</td>
<td>10.92%</td>
</tr>
<tr>
<td>Five (5) Exercises: <em>Natural History Lab, Cemetery Survivorship Curves, Population Pyramids, Paramecia Interactions, Vegetation Data Analysis</em> – Generally due on Sundays. 20% each</td>
<td>100</td>
<td>13.66%</td>
</tr>
<tr>
<td>Independent Research Project – Due the last day of the term: week 3 – proposal (15%); week 6 – optional draft (0%), week 15 final (85%)</td>
<td>172</td>
<td>23.50%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>732</strong></td>
<td><strong>100.00%</strong></td>
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</table>
The grading scale for students enrolled for credit is:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
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<tbody>
<tr>
<td>A+</td>
<td>98% - 100%</td>
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<tr>
<td>A</td>
<td>94% - &lt;98%</td>
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<tr>
<td>A-</td>
<td>90% - &lt;94%</td>
</tr>
<tr>
<td>B+</td>
<td>88% - &lt;90%</td>
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<tr>
<td>B</td>
<td>84% - &lt;88%</td>
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<tr>
<td>B-</td>
<td>80% - &lt;84%</td>
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<tr>
<td>C</td>
<td>70% - &lt;80%</td>
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<tr>
<td>F</td>
<td>&lt;70%</td>
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</tbody>
</table>

Late work (any assignment turned in after an assigned due date) will receive zero credit and extra credit is not used in this course. If you are experiencing extenuating circumstances, you must reach out to me immediately. For additional information, please read page 15 (Section entitled, “Getting Help”).

Assignment Guidelines
1. How should assignments be submitted?
The weekly directions will indicate where assignments will be posted (e.g., in assignment tool within the Lessons folder). If submitting documents to an assignment or forum, please specify the assignment name in the discussion thread and/or the document title. When creating files, include your name and the name of the assignment in the file title. Also, please be sure to only include one period in file names. The period should be between the file name and the extension. For example: YourLastName_Assignment1.doc, such as SantiagoBlay_Discussion00.

2. When are assignments due?
Assignment and activity due dates are listed in this syllabus and the weekly To Do list. The instructor via an announcement in the online classroom will announce changes. Some larger assignments will be completed over several weeks. In these cases, you will be prompted to complete portions of the assignment each week.

3. When will completed assignments be returned?
Dr. Santiago-Blay will aim to return assignments to you within 5-7 days following the due date, depending on the length of the assignment. You will receive feedback under the My Grades link on the left-hand menu of your course.

4. What is the policy for late assignments?
You are expected to contact your instructor in advance if you think you cannot meet an assignment due date. **However, if an assignment is late and prior arrangements have not been made with the instructor, the assignment score will be zero.** There are no exceptions.

Time Management Expectations: What are the time demands and schedule of the course?
Because this is a graduate-level course the rigor and time commitment are higher than a traditional semester course. It is expected that you look ahead to schedule your time. Plan to complete coursework across several days of the week rather than all in one day.

Some assignments require that you work on them for multiple weeks. Be sure to review the assignment directions at the beginning of the course so that you can plan your time accordingly.
Section 5: Course Participation and Communication Policy

Participation
What are the participation requirements?
You are recommended to log into the online classroom at least three times a week, though a daily check-in is advised. It is your responsibility to read all announcements and discussion postings within your assigned forums. You should revisit the discussion multiple times over the week to monitor and review feedback from your peers. During those Modules where threaded discussions are assigned, I will read and grade the student discussions, but I will not address most posts – this is where a lot of the real learning occurs, and it will be from your peers. In some cases, I might share a related idea, intervene when the discussion goes off-track, or tie student comments together to help deepen student learning. Consequently, I will not directly answer questions in the discussion area unless they are addressed to me. I will check the discussions daily during the week, and occasionally on the weekends.

Network Etiquette (i.e. “Netiquette”)
In this course, online discussion will be primarily take place in our online discussion board. In all textual online communication, it important to follow proper rules of netiquette.
What is netiquette? Simply stated, it's network etiquette -- that is, the etiquette of cyberspace. And "etiquette" means the social and cultural norms of communicating with others in a proper and respectful way. In other words, netiquette is a set of rules for behaving and interacting properly online.

The Netiquette “Core Rules” linked below are a set of general guidelines for cyberspace behavior. They probably won't cover all situations, but they should give you some basic principles to use in communicating online.

For Netiquette Core Rules visit The Core Rules of Netiquette web page.

Contacting the Instructor
The instructor for this course is Dr. Jorge A. Santiago-Blay, blayj@jhu.edu.

The fastest way to contact me is via email. Please, feel free to send me comments, questions, and concerns. Under typical circumstances, you will receive a response within 24-48 hours.

All email messages will be sent to you via your JHU email account, so you should be in the habit of checking that account every day, or you should ensure that your JHU email account forwards messages to another account of your choice.

Professionalism is expected throughout this course whether in the online classroom or email. Your responses to questions, interaction/communications/emails with classmates or me should be
professional in manner. This includes “netiquette” (electronic etiquette) such as using salutations [not “Hey! Or “Hi Jorge”; instead, Professor (or Dr.) Santiago-Blay, please] when you send an email, signing your emails, and responding to emails in a timely fashion.

Section 6: Course Protocols and Getting Help

How will I know about changes to the course?
Frequently, you will find new announcements posted in the Announcements, which contain information about current course activities that you are working on and any changes to the course. Please check announcements every time that you log into your online course.

How should I communicate with others in this course?
You should communicate often with your classmates and with Professor Blay. Most of communication will take place within the Discussion forums. When you have a question about an assignment or a question about the course, please post your question in the course’s “Ask Your professor” forum.

Are there any requirements for sending e-mail messages?
When you send an e-mail message to the instructor or to another participant in the course, please observe the following guidelines:
1. Include the title of the course in the subject field (e.g., JHU Principles and Methods of Ecology).
2. Keep messages concise, and check spelling and grammar.
3. Send longer messages as attachments.
4. Sign your full name (the sender’s email is not always obvious).
Section 7: Schedule, Course Topics, and Activities

Tentative Course Schedule

**Important Note:** Activity and assignment details will be explained in detail within each week's corresponding learning module.

<table>
<thead>
<tr>
<th>Dates (Except for the first and last week, always Monday to Sunday)</th>
<th>Readings from Textbook</th>
<th>Non-textbook materials available in our electronic classroom</th>
<th>Assessments and Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/5-9/9</td>
<td>Module 1: Introduction – The Physical Environment of the Biosphere</td>
<td>Chapters 1 and 2 of Singer’s textbook and required resources noted in Blackboard.</td>
<td>All homework for the term is due no later than 11:59PM Maryland time. Submitted work ahead of time is encouraged and greatly appreciated!</td>
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<td>By the end of this short week, which ends on Sunday:</td>
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<td>Complete Discussion 01.1. Introduce yourself and answer these questions.</td>
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<td></td>
<td>Why are you taking this course?</td>
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<td>Why is ecology important today?</td>
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<td>Briefly discuss three major developments in ecology, say in the last 30 years.</td>
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<td></td>
<td>Briefly discuss three major unsolved questions/problems in ecology?</td>
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<td>Deliverables: One initial post, and three (3) meaningful replies to classmates (OK to reply to me especially if nobody else has replied by the time you are prepared to reply). Note: Using VoiceThread is optional. Type your replies directly in Blackboard, instead of uploading a file to facilitate interactions.</td>
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<td></td>
<td>Complete Quizzes on Singer Chapters 1 and 2.</td>
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<td>Complete Discussion 01.2 on Module 1. Response to journal readings.</td>
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<td>Readings: Read Venter et al. 2016 introducing ecology and some of the major problems ecosystems face.</td>
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</table>
Begin thinking about the Natural History Laboratory (located in Module 2). The scientific method begins with observations about the natural world, its patterns and processes. This assignment will help you begin thinking of testable questions, including having controls, and designing good experiments, to explain natural observations.

Deliverables (due on Week 2): A presentation using PowerPoint, or Prezi, or VoiceThread with image documentation and a hypothesis.

All work for this short week is due on Sunday!

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<thead>
<tr>
<th>9/10-9/16</th>
<th>Module 2: Dealing with Environmental Variation</th>
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<tbody>
<tr>
<td></td>
<td>Chapters 3, 4, and 5 of Singer’s textbook and required resources noted in Blackboard.</td>
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</table>

Quizzes on Singer Chapters 3, 4, and 5 Due on Thursday.

Natural History Laboratory. The scientific method begins with observations about the natural world, its patterns and processes. This assignment will help you begin thinking about controls, testable hypotheses, and experiments to challenge our hypotheses to explain natural observations.

Deliverables: A presentation using Photoshop, or Prezi, or VoiceThread with photo documentation. Due on Sunday.

SimBio- Niche Wars Examine hyperspace partitioning, but the main learning goal is to introduce the SimBio interface.

Deliverables: Answers submitted through the SimBio interface. Due on Sunday.

Discussion 02.1. Due on Sunday.

Discussion 02.2. Due on Sunday.

Discussion 02.3. Due on Sunday.

Looking ahead: Begin planning the Independent Research Project (located in Module 3). The scientific method begins with observations about the natural world, its patterns and processes.

<table>
<thead>
<tr>
<th>9/17-9/23</th>
<th>Module 3: Principles of Ecology:</th>
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<tbody>
<tr>
<td></td>
<td>Chapters 6 and 7 of Singer’s textbook and required resources noted</td>
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</table>

Quizzes on Singer Chapters 6, 7. Due on Thursday.

Discussion 03.1. Due on Sunday.

Discussion 03.2. Due on Sunday.
<table>
<thead>
<tr>
<th>Date Range</th>
<th>Module Title</th>
<th>Text Information</th>
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<tbody>
<tr>
<td>9/24-9/30</td>
<td><strong>Module 4:</strong> Ecology of Individuals and Population</td>
<td>This week you will upload a file consisting of a proposal for your Independent Research Project. <strong>Due on Sunday.</strong>&lt;br&gt;Quizzes on Singer Chapters 8, 9. <strong>Due on Thursday.</strong>&lt;br&gt;SimBio: Understanding Population Growth Models. <strong>Due on Sunday.</strong>&lt;br&gt;Cemetery Survivorship Curves. <strong>Due on Sunday.</strong>&lt;br&gt;The Power of Pyramids: <strong>Due on Sunday.</strong>&lt;br&gt;Note the plethora of articles in the section Readings and Resources that will enrich your understanding of population pyramids and demography, including survivorship curves and birth patterns.&lt;br&gt;Discussion 04.1 <strong>Due on Sunday.</strong>&lt;br&gt;Discussion 04.2 <strong>Due on Sunday.</strong>&lt;br&gt;Keep working on IRP paper, making observations, and collecting data. Please, feel free to consult with me as needed.</td>
</tr>
<tr>
<td>10/1-10/7</td>
<td><strong>Module 5:</strong> Population Dynamics</td>
<td>Quizzes on Singer Chapters 10, 11, and 12. <strong>Due on Thursday.</strong>&lt;br&gt;Discussion 05.1 <strong>Due on Sunday.</strong>&lt;br&gt;Discussion 05.2. <strong>Due on Sunday.</strong>&lt;br&gt;SimBio- Isle Royale <strong>Due on Sunday.</strong>&lt;br&gt;Keep working on IRP, making observations, and collecting data.</td>
</tr>
<tr>
<td>10/8-10/14</td>
<td><strong>Module 6:</strong> Organismal Interactions I</td>
<td>Quizzes on Chapters 13 and 14. <strong>Due on Thursday.</strong>&lt;br&gt;SimBio: Barnacle Zone. <strong>Due on Sunday.</strong>&lt;br&gt;Paramecia Interactions Assignment. Competition between two species of Paramecium.&lt;br&gt;Suggestion to students: Consider consulting Singer p. 264 to deepen</td>
</tr>
<tr>
<td>Date</td>
<td>Module</td>
<td>Content</td>
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<tr>
<td>10/15-10/21</td>
<td>Module 7:</td>
<td>Chapters 15 and 16 of Singer’s textbook and required resources noted in Blackboard. Quizzes on Chapters 15 and 16. Deliverables: Answers submitted through the online classroom. Due on Thursday. SimBio: Top-Down Control. Due on Sunday. Discussion 06.1 Due on Sunday. Optional Draft IRP Paper. Due on Sunday. An optional draft proposal for your IRP is &quot;due&quot; by the end of this week. This is not a hard or even mandatory submittal, but I am more than happy to look at your work to make sure you are on track. Just upload your proposal in Blackboard. Your understanding about competition. Due on Sunday.</td>
</tr>
<tr>
<td>10/22-10/28</td>
<td>Module 8:</td>
<td>Chapters 17 and 18 of Singer’s textbook and required resources noted in Blackboard. Quizzes on Singer Chapters 17 and 18. Due on Thursday. Sim Bio: Keystone Predator. Due on Sunday. Vegetation Data Analysis. Due on Sunday. Discussion 07.1 Due on Sunday. Discussion 07.2 Due on Sunday. Continue working in your Independent Research Project - due at the end of the course.</td>
</tr>
<tr>
<td>10/29-11/4</td>
<td>Module 9:</td>
<td>Chapters 19 and 20 of Singer’s textbook and required resources noted in Blackboard. Quizzes on Singer Chapters 19 and 20. Due on Thursday. Discussion 09.1 Due on Sunday. Discussion 09.2 Due on Sunday. Continue working in your Independent Research Project - due at the end of the course.</td>
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</tbody>
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### Module 7: Organismal Interactions II

- Chapters 15 and 16 of Singer’s textbook and required resources noted in Blackboard.
- Quizzes on Chapters 15 and 16. Deliverables: Answers submitted through the online classroom. Due on Thursday.
- SimBio: Top-Down Control. Due on Sunday.
- Discussion 06.1 Due on Sunday.
- Optional Draft IRP Paper. Due on Sunday. An optional draft proposal for your IRP is "due" by the end of this week. This is not a hard or even mandatory submittal, but I am more than happy to look at your work to make sure you are on track. Just upload your proposal in Blackboard.
- Your understanding about competition. Due on Sunday.

### Module 8: Biological Communities: Their Diversity and Stability

- Chapters 17 and 18 of Singer’s textbook and required resources noted in Blackboard.
- Quizzes on Singer Chapters 17 and 18. Due on Thursday.
- Sim Bio: Keystone Predator. Due on Sunday.
- Vegetation Data Analysis. Due on Sunday.
- Discussion 07.1 Due on Sunday.
- Discussion 07.2 Due on Sunday.
- Continue working in your Independent Research Project - due at the end of the course.

### Module 9: Ecosystems: Cycles of Nutrients and Energy

- Chapters 19 and 20 of Singer’s textbook and required resources noted in Blackboard.
- Quizzes on Singer Chapters 19 and 20. Due on Thursday.
- Discussion 09.1 Due on Sunday.
- Discussion 09.2 Due on Sunday.
- Continue working in your Independent Research Project - due at the end of the course.
| Flows of Energy | 11/5-11/11  
Module 10: Ecosystems: Changes in Biodiversity and Ecosystem-Level Functions through Time | Quizzes on Singer Chapters 21 and 22. **Due on Thursday.**  
SimBio: Patchy Prairies. Chapter 22 of Singer’s textbook will be particularly useful for this exercise. **Due on Sunday.**  
SimBio: Intermediate Disturbance Hypothesis (IDH) **Due on Sunday.**  
Discussion 10.1 **Due on Sunday.**  
Continue working in your Independent Research Project - **due at the end of the course.** |
| --- | --- | --- |
| 11/12-11/18  
Module 11  
Global Ecology: Carbon and Climate Change | Quizzes on Singer Chapters 23 and 24. **Due on Thursday.**  
Discussion 11.1 **Due on Sunday.**  
Discussion 11.2 **Due on Sunday.**  
Continue working on your Independent Research Project - **due at the end of the course.** |
| 11/19-11/25 | Thanksgiving Holiday | |
| 11/26-12/2  
Module 12  
Global Ecology and Conservation Biology I: Biodiversity | Required resources noted in Blackboard.  
Discussion 12.1 **Due on Sunday.**  
Discussion 12.2 **Due on Sunday.**  
Discussion 12.3 **Due on Sunday.**  
Reminder: The Independent Research Project assignment given earlier is **due the last day of this course.** |
Section 8: University Policies

General
This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities
Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a link to the Student Request for Accommodation form can also be found on the Disability Accommodations page.
Ethics & Plagiarism: JHU Ethics Statement
The strength of the university depends on academic and personal integrity. In this course, you
must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of
assignments, improper use of the Internet and electronic devices, unauthorized collaboration,
alteration of graded assignments, forgery and falsification, lying, facilitating academic
dishonesty, and unfair competition. Report any violations you witness to the instructor. Read and
adhere to JHU’s Notice on Plagiarism.

Dropping the Course
You are responsible for understanding the university’s policies and procedures regarding
withdrawing from courses found in the current catalog. You should be aware of the current due
dates according to the Academic Calendar.

Getting Help
You have a variety of methods to get help. Please consult the help listed in the "Blackboard Help"
link in the online classroom for important information. If you encounter technical difficulty in
completing or submitting any online assessment, please immediately contact the designated help
desk listed on the AAP online support page. Also, contact your instructor at the email address
listed atop this syllabus.

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All course materials are the property of JHU and are to be used for the student's individual
academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or
transmitting of any course material content for any other purpose is prohibited, will be considered
misconduct under the JHU Copyright Compliance Policy, and may be cause for disciplinary
action. In addition, encouraging academic dishonesty or cheating by distributing information
about course materials or assignments which would give an unfair advantage to others may violate
AAP’s Code of Conduct and the University’s Student Conduct Code. Specifically, recordings,
course materials, and lecture notes may not be exchanged or distributed for commercial purposes,
for compensation, or for any purpose other than use by students enrolled in the class. Other
distributions of such materials by students may be deemed to violate the above University policies
and be subject to disciplinary action.

Code of Conduct
To better support all students, the Johns Hopkins University non-academic Student Conduct Code
has been integrated and updated to include all divisions of the University. In addition, it is
important to note that all AAP students are still accountable for the Code of Conduct for Advanced
Academic Programs.

Title IX: Confidentiality and Mandatory Reporting
As an instructor, one of my responsibilities is to help create a safe and inclusive learning
environment on our campus. I also have mandatory reporting responsibilities related to my role
as a Responsible Employee under the Sexual Misconduct Policy & Procedures (which prohibits
sexual harassment, sexual assault, relationship violence and stalking), as well as the General Anti-
Harassment Policy (which prohibits all types of protected status-based discrimination and
harassment). It is my Learning Goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, I am required to share information that I learn of regarding sexual misconduct, as well as protected status-based harassment and discrimination, with the Office of Institutional Equity (OIE). For a list of individuals/offices who can speak with you confidentially, please see Appendix B of the JHU Sexual Misconduct Policies and Laws.

For more information on both policies mentioned above, please see: JHU Relevant Policies, Codes, Statements and Principles. Please also note that certain faculty and other University community members also have a duty as a designated Campus Safety Authority under the Clery Act to notify campus security of certain crimes, as well as a duty under State law and University policy to report suspected child abuse and/or neglect.