

Exploring the Art and Science of Biodiversity in Guyana Wintersession 2019

HPSS - Lucy Spelman | lspelman@risd.edu

LAS - Tom Doran | tdoran@risd.edu

Course Description

In this course students will explore the artistic, cultural, economic, literary, and scientific role of biodiversity in today's society. Using Guyana, a biodiverse English-speaking Caribbean nation located along the northeastern coastline of South America as an example, students will approach the topic of biodiversity from multiple perspectives, including the natural sciences, social sciences, humanities, and visual arts. More specifically, this course offers RISD students the opportunity to visit a biological hotspot and consider its role in society; participate in conservation science field research; interact cross-culturally; and develop their communication skills. Taught collaboratively, this course emphasizes the importance of connecting ideas, information, and methodologies across the arts, humanities, and sciences, with an emphasis on biology.

Students will spend the first week at RISD, the next three in Guyana and the last at RISD.

The general goals of this course are:

To give art, design, and science communication students the opportunity to (re) connect the arts, sciences, and humanities to better understand and solve problematic human-animal interactions.

To create a multi-disciplinary, cross-cultural, learning experience

The learning goals/skills gained are:

Explore mostly pristine wilderness in remote parts of a developing country

Learn how biodiversity is studied and how biodiversity studies inform conservation decisions

Design a short-term biodiversity monitoring study

Collect and analyze field data

Interact cross-culturally with Guyanese nationals, including Amerindians

Develop science communication skills using art and design

Some of the questions we will consider during this course include:

- 1) What concepts, theories, and methods inform our research and debates about biodiversity, conservation, and human impacts on the natural world?
- 2) How and by whom are biodiversity field studies conducted? How are the results applied to conservation?
- 3) How do we decide what species and/or ecosystems merit conservation?
- 4) What kinds of science, stories, and metaphors shape our understanding of socio-ecological networks and how they change over time?
- 5) How do we represent biodiversity to ourselves and to others by means of particular images and narratives, and to what effect?
- 6) Do the arts and humanities approach biodiversity differently than the sciences? If so, what are the differences and how might we bring the arts, humanities, and sciences together in order

to think about biodiversity?

- 7) What does the term “sustainable development” mean in the Guyanese context? In what ways might Guyanese efforts at “sustainable development” differ from efforts in other countries?

Course Requirements--grading elements:

- ❖ Active and Informed Participation in Class Discussion at RISD and in Guyana (20%)
- ❖ Written Reading Responses—Scientific(10%)
- ❖ Written Reading Responses- Literary (10%)
- ❖ Field Project: Biodiversity Monitoring (20%)
- ❖ Field Project: Field Journal (20%)
- ❖ Artist Research Archive (10%)
- ❖ Major Project Artwork (10%)

Grading elements: detail

Active and Informed Participation in Class Discussion and Fieldwork (20%)

This course is discussion-based and experiential, which means your ideas, concerns, questions, and arguments about the texts, and your participation in fieldwork comprise the work for the course.

When assigned readings, your role is to read carefully and thoroughly, and be prepared to ask questions and contribute to discussion. Characteristics of active and informed class discussion include the following:

- ❖ Consistent participation
- ❖ Comments that draw our attention to specific phrases, passages, or elements of the text
- ❖ Comments that attempt analysis or interpretation or draw connections between texts or ideas
- ❖ Comments that help the entire class begin, develop, or continue a productive line of inquiry
- ❖ Comments that respond or refer to comments made by other members of the class or to discussions from previous class periods
- ❖ Comments that, in addition to addressing the text under discussion, usefully employ or refer to other course texts

To aid you in participating in class discussion, we encourage you to a prepare list of questions to pose, passages to discuss, and connections to note.

2) Written Reading Responses—Scientific (10%)

There will be written responses required based on the scientific readings.

3) Written Reading Responses- Literary (10 %)

There will be written responses required based on the literary readings.

4) Major Project: Biodiversity Monitoring (20 %)

While at Surama Village, you will participate in biodiversity monitoring studies designed to document the flora and fauna of area. You will explore areas that are nearly pristine, mostly untouched by human activity, including the Bora Bora and Rupununi Rivers, the Iwokrama Rainforest, and the North Rupununi savanna and wetlands. You will also explore the biodiversity found on local farms, roads, and villages.

This research will contribute to the ongoing efforts within Guyana to evaluate both the biological value of

the North Rupununi region and the extent of human impact on its flora and fauna. Each student will make an on-site presentation about his/her scientific findings.

List of potential projects:

- ❖ Amphibian/Reptile diversity survey
- ❖ Bird diversity survey
- ❖ Camera trap Mammal survey
- ❖ Invertebrate diversity survey
- ❖ Natural sounds study
- ❖ Native medicinal plants survey
- ❖ Domestic animal health survey (village)

5) Field Project: Field Journal (20 %)

At each location, you will document your surroundings by creating a Field Journal to include sketches, notes, and journal entries. The journal is an opportunity for you to explore the concepts of biodiversity and conservation from a personal perspective. We encourage you to use various methodologies in art, design, and the humanities, along with the power of observation, to explore the phenomenological aspects of Guyana.

6) Artist Research Archive (10 %)

Each RISD student will generate a research archive of material designed to be useful for future studio practice. The research archive may consist of photographs, drawings, paintings, sculptures, recordings, videos, or other modes of recording your responses to the environments in Guyana. We encourage you to organize the archive electronically for future use.

7) Major Project Artwork (10 %)

While in Guyana, students will share their artwork and reactions to their time in Guyana with hosts and local participants. Upon returning to Rhode Island, each RISD student will complete a finished piece of art or design work, based on the travel experience in Guyana suitable for final crit in class and potentially for exhibition in a group show. This work should be designed to engage general audiences in the general topic of biodiversity studies and in the particular science the student studied.

Required Course Text

Jan Carew, *Black Midas*, available for purchase on Amazon <<http://www.amazon.com/Black-Midas-Caribbean-Modern-Classics/dp/1845230957>>. The rest of the course texts will be distributed.

On Academic Dishonesty and Plagiarism:

Plagiarism, the unacknowledged use of ideas or words generated by another person, is never acceptable. Plagiarism includes the unacknowledged use of the work of another student and the unacknowledged use of material from books, magazines, and online sources. Presenting collaborative work as one's own, receiving help on written work without disclosing such assistance, submission of the same work in two classes without the permission of the instructor, and stealing, destroying, or defacing the work of others are additional examples of academic dishonesty/plagiarism. The expectation in the courses taken within the Division of Liberal Arts is that "all students enrolled in its courses faithfully

document and cite any works of reference or examples" in their own written work. If you are ever in doubt, give credit to the original work by citing your source. Severe consequences result from academic dishonesty/plagiarism: you may fail the assignment, the course and/or may be expelled from RISD. If at any time during the semester you feel confused or overwhelmed by your work, or you feel unsure about how to document your debts to the work of others, please come see me.

Please familiarize yourselves with RISD's Academic Code of Conduct, which can be found here: http://www.risd.edu/Policies/Academic/Code_of_Conduct/.

Students with Disabilities:

If you are a student with a disability that may require accommodations to complete the requirements of this class, we encourage you to discuss your learning needs with us during the first week of the term. Once you submit an approval letter from the Office of Disability Support Services to us, accommodations will be provided as needed.

Syllabus: EXPLORING THE ART AND SCIENCE OF BIODIVERSITY, GUYANA

<p>Course Week 1 At RISD</p>	<p>Session 1: GUYANA INTRODUCTION</p>
<p>Reading for Session 1 All readings posted on Digication</p>	<p>Scientific BIODIVERSITY measures, monitoring, and trends Measuring Biodiversity IUCN reports endangered species in Guyana Recent articles biodiversity in S. America Recent articles biodiversity in the Rupununi Southern Guyana</p> <p>Literary Juliana Spahr, "Unnamed Dragonfly Species"</p>
<p>Session 1 (3 hr) Jan 4 (DATES TENTATIVE)</p>	<p><u>Introduction</u> Instructors Students Course</p> <p><u>Lectures</u> Guyana Biodiversity and Geology Political/Cultural History of Guyana</p> <p><u>Discussion</u> Environmental Humanities approaches to biodiversity and species loss Juliana Spahr, "Unnamed Dragonfly Species"</p>
<p>Reading Responses for Session 1</p>	<p>Assignments posted on Digication Due next day by 3 PM</p>

Syllabus: EXPLORING THE ART AND SCIENCE OF BIODIVERSITY, GUYANA

Week 1 continued	Session 2: CHANGING GUYANA - Biodiversity/Black Midas
Reading for Session 2	<p>Scientific TEXTBOOK CHAPTERS Tangled Bank Evolutionary Biology—Chapter 11: “Macroevolution: Life in the Long Run” Conservation Science—Chapter 1: “Humans are the Dominant Ecological Force”, Chapter 2: “Biodiversity and Extinction”, CH 18: “Climate Change on a Global Scale</p> <p>Additional news articles as appropriate - recent coverage of biodiversity studies in the science news, in general and in Guyana. e.g., Biodiversity Farming and Food Security Curr Op Env Sust 2011 Barnosky 6th Great Extinction Nature 2011 Can Science Save the Giant Panda Tropical Ecosystems and Climate Change Jagdeo Climate Initiative Guyana 2009</p> <p>Literary (1) NOVEL Jan Carew, Black Midas (19-266) See Digication for background and reading questions about the novel in preparation for class discussion</p>
Session 2 (3 hr) JAN 7	<p><u>Discussions</u> Explore student interests in biodiversity and ideas for field work at Surama; discuss methodology</p> <p>Novel - Black Midas</p>
Reading Responses for Session 1	<p>Assignments #3 and #4 posted on Digication</p> <p>Written responses <u>Due next day by 3 PM</u></p>

Week 1 continued	Session 3: PREPARATION FOR FIELD WORK
Reading for Session 3	<p>Scientific Student researched articles as references for field work - 5 due per student with 1 page description of proposed field research</p> <p>Literary Elizabeth Kolbert, "The Sixth Extinction?"</p>
Session 3 JAN 9	<p><u>Lecture</u> Definitions BIODIVERSITY, SPECIES, MACROEVOLUTION - How biodiversity changes over time - speciation, diversification, extinction; CONSERVATION, SCIENTIFIC METHOD, methods used for monitoring biodiversity</p> <p>Current opportunities and challenges facing the biodiversity of the Rupununi region of Guyana: Climate change, Farming, Mining, Wildlife trade, Human population growth</p> <p><u>Discussion</u> Elizabeth Kolbert "The Sixth Mass Extinction"</p> <p><u>Itinerary/Packing/Checklist review</u></p>
Reading Responses for Session 3	<p>Assignments #5 posted on Digication</p> <p>Written responses <u>Due next day y 3 PM</u></p>

Course Week 2 In Guyana	TRAVEL GEORGETOWN and RAINFOREST
Jan 12 TO GUYANA (suggested dates)	Day 1 Travel day: RISD to JFK to GEO Leave 9 AM 5:40 PM flight to Guyana Arrive Georgetown late 1:40 AM Stay in Georgetown at Cara Lodge
Jan 13	Day 2 In Georgetown—Stay in Georgetown at Cara Lodge Explore Georgetown part 1 Downtown, zoo, botanical gardens Evening discussion
Jan 14	Day 3 In Georgetown—Stay in Georgetown at Cara Lodge Explore Georgetown part 2 Fish market, art museum Prepare for trip to interior/pack bus
Jan 15	Day 4 Travel to IWOKRAMA FOREST LODGE by MINI BUS ALL TRAVEL in the interior by ground will be in hired MINIBUS with driver Darwin driver + Dennis D'Agrella course logistics/fixer Early AM start Afternoon arrive Iwokrama Lodge Overnight in lodge
Jan 16	Day 5 Stay at Iwokrama Lodge Orientation to research and monitoring programs AM River outing afternoon Lectures by Iworkama scientsts PM
Jan 17	Day 6 Stay at Iwokrama Lodge Day long trip to Turtle Mountain PM lectures by Iwokrama scientists Start Field Notebook and Artist Archive

Jan 18	<p>Day 7</p> <p>Travel to Surama/Iwokrama Canopy Lodge</p> <p>Afternoon visit Canopy Walk</p> <p>Drive to Surama</p> <p>Pitch Tents</p> <p>Overnight at Surama – tents</p> <p>Joined by local Guyanese students</p>
Course Week 3 In Guyana	BIODIVERSITY STUDIES IN A MACUSHI VILLAGE
Jan 19 (1st of 10-day visit for biodiversity projects at Surama)	<p>Day 8</p> <p>Day 1 Surama</p> <p>AM Orientation and morning walk</p> <p>Start reading Pauline Melville’s The Ventriloquist’s Tale</p> <p>Aft birding</p> <p>PM Discuss biodiversity projects and artist workshop</p>
Jan 20	<p>Day 2 Surama</p> <p>SUNDAY REST DAY</p> <p>AM and PM nature walks</p> <p>Work on artist’s archives, reading, field journal notes</p> <p>Choose project</p> <p>Lunch - Discussion of Rupununi Uprising events</p>
Jan 21	<p>Day 3 Surama</p> <p>AM Bora Bora river trip</p> <p>Continue artist’s archives, reading, field journal notes</p> <p>Lunch - First discussion Pauline Melville’s The Ventriloquist’s Tale</p> <p>Aft and PM: Discuss and finalize biodiversity projects – form teams</p>
Jan 22	<p>Day 4 Surama</p> <p>AM and AFT - Data collection (day 1) for biodiversity project</p> <p>Continue artist’s archives, reading, field journal notes</p> <p>Late AM - visit Village, school</p> <p>Lunch - Second discussion Pauline Melville’s The Ventriloquist’s Tale</p>
Jan 23	<p>Day 5 Surama</p> <p>AM and AFT - Data collection (day 2) for biodiversity project</p> <p>Continue artist’s archives, reading, field journal notes</p> <p>Lunch discussion Amerindian mythology</p> <p>PM story telling</p>

Jan 24	Day 6 Surama AM and AFT - Data collection (day 3) for biodiversity project Continue artist's archives, reading, field journal notes Lunch discuss short stories Second discussion Amerindian mythology/storytelling
Jan 25	Day 7 Surama AM and AFT - Data collection (day 4) for biodiversity project Continue artist's archives, reading, field journal notes Lunch discuss short stories PM Prepare for artist workshop (Saturday)
Course Week 4 In Guyana	Day 8 Surama AM and AFT - Data collection (day 5) for biodiversity project Continue artist's archives, reading, field journal notes
Jan 26	Lunch - ARTIST WORKSHOP with Wildlife Club: informal instruction
Jan 27	Day 9 Surama REST DAY Analyze data Prepare student presentations
Jan 28	Day 10 Surama AM: prepare for presentations Lunch: STUDENT PRESENTATIONS at Surama "Artists's experience in Guyana" Invited guests including lodge staff, village school teachers -
Jan 29	Yupukari DRIVE TO YUPUKARI Lunch - visit schools, village tour Aft - Rupununi River trip #1 (birds, plants) Stay at Caiman House
Jan 30	At Yupukari Village AM - Rupununi River Trip #2 (giant otters) Lunch/aft - ARTIST WORKSHOP w Wildlife Club: informal instruction PM - Rupununi River Trip #3 (caiman tagging) Stay at Caimain House
Jan 31	Start for Georgetown DRIVE TO IWOKRAMA Arrive late Stay at Iwokrama Lodge

Feb 1	DRIVE REST OF WAY TO GEORGETOWN Arrive Cara Lodge Stay at Cara Lodge
Class Week 5 Feb 2	RETURN TO US Day 15 Return to US
Feb 6	LAST CLASS Debrief Final works due - group crit of artwork