

# Science & Engineering of Animal Conservation

[Monday 9:30am-10:20am, Klaus 1440]

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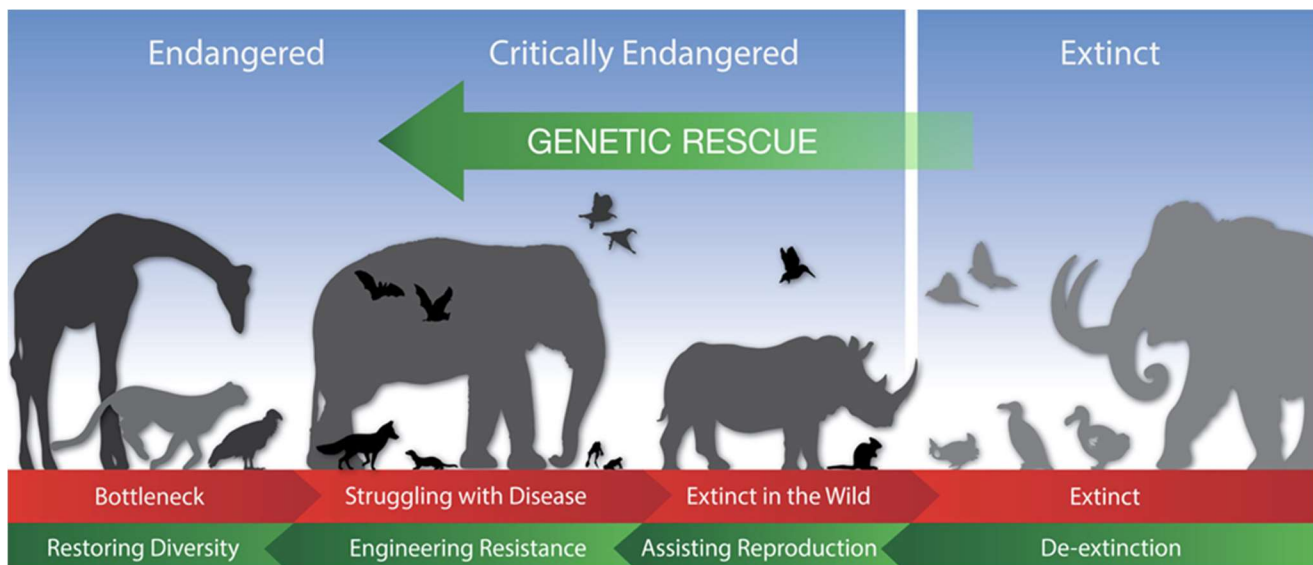
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Animals are raised and rehabilitated in different conservation centers around the globe including Zoos, Aquariums, Sanctuaries, etc. There is a need for developing new techniques to aide in the conservation of these animals to prevent extinction and increase biodiversity. Examples include using drones to track rhinos to mitigate poaching and making bee fences to keep elephants from raiding crops. The goal of this VIP is to bring different disciplines to work on problems proposed by different sponsors to aide in conservation of various species. After this course is completed you will know how to conduct ethical experiments with animals to aide in the conservation of endangered and vulnerable species. Furthermore, continual participation in this VIP will allow you to go through all steps of the scientific method and allow you to communicate with international leaders in wildlife and species conservation.



## Course Details

**Course Goals:** Upon successful completion of this VIP, you will be able to:

1. Identify ways humans can aide in the conservation of species
  - a. Describe the North American Conservation Model & how it relates to your project
2. Design and conduct ethical experiments with various species
  - a. Identify different ethical research organizations in the area and review their missions (ex. Zoo Atlanta)
3. Effective recording of detailed Scientific methodology and project outcomes in a notebook
4. Review and Critique conservation related literature and media
5. Communicate with international leaders in species conservation

## Course Projects

This VIP has several ongoing and new projects with sponsors from around the world. For more information please view the [VIP Course Project Slides](#).

## Course Expectations & Guidelines

While working on your projects in and outside of class it is expected you are attentive and that you will ask questions to guest speakers and/or your peers. For those students presenting or leading discussing in class it is expected that you listen to your peers and respect their wishes. To succeed in this course, I expect you to have developed an understanding of the species you are studying and the challenges that species is currently facing.

As a nature of the VIP there are several different majors working on the same project and it is encouraged for you to get outside of your major area and explore other ideas and possibilities on your research and in your journal presentation.

I expect you to be honest and fair to all your peers during the peer review process. The Graduate Assistant will be reviewing the peer evaluations and will be following up with students that are not meeting the course expectations.

### Attendance and/or Participation

Attendance and participation are required to succeed in the course. Attending and participating in your peers' journal presentations, guest speakers, etc. is required of those that do not have class conflicts. If you do have class conflicts these are not required. There will be midterm and final presentation days and it is expected that all members of the class will be in attendance for the presentations.

The class has a slack channel for general questions, and for different teams. We will also be hosting several guest speakers through the semester that are experts in conservation, ecology, science communication, exotic species veterinary care, and more. Please be respectful when guests join class and come prepared with questions.

If you will miss class for any reason, please let the graduate assistant know. It is understood that college is stressful and that their things that happen in life so if you are not able to let the graduate assistant know beforehand please let them know in a timely manner. All students in the course will be given one mental health day where no notification of missing class is necessary. The Graduate Assistant will do his best for all courses to recorded via Bluejeans on Canvas and posted at the end of class for those that must miss class for any reasons.

### Collaboration & Group Work

There are many different items in this classroom that are group oriented. I encourage and insist you work closely with your groups for your presentations and reports. It is also important to that each student should have an individual notebook and should not copy/cheat off their peers' notebooks. Each person's notebook will be unique to them. It is expected for group members to miss occasional out of class/in class meetings.

## Extensions, Late Assignments, & Re-Scheduled/Missed Exams

Most of the assignments in this class are based on participation. If you forget to bring your notebook to class, then discuss with the Graduate Assistant to find a time to bring the notebook. If you miss the midterm or final presentation then a time will be set up for you to sit down share and present the information you worked on with the Graduate Assistant and/or Faculty mentor.

## Student Use of Mobile Devices in the Classroom

Cells phones can and should be used in the classroom for helping with research, messaging contacts, skyping missing group members, etc. During all presentations it is expected for you to be attentive to the presenters

## Course Requirements & Grading

A list of the different components of this VIP course are listed below. If you have further questions about the course requirements/grading

Assignment	Percent of Total Grade
Participation in Journal Club	20%
Midterm Presentation	10%
Final Presentation	10%
Notebook	20%
Final Report	10%
Peer Evaluations	10%
Extra Presentation	Required to pass class*

\*The Extra Presentation is only required if you are enrolled in 2-credit hours and there are several ways over course of the semester to meet this requirement

## Description of Graded Components

Rubrics for each of the following will be posted to the canvas page. You will also receive comments from the TA for each submitted assignment.

**Journal Club:** Each student presentation week listed in the Class Timeline section there will be a journal discussion of an article in that area. Each journal club will be run by a student in the course. A sign up will go out at the beginning of the course for students to sign up for specific weeks to run journal club. If you are running the journal club for that week you are expected to find an article that interests, you around the topic covered and share it with the rest of the class a week beforehand. If you are not running the journal club, you are expected to read the material beforehand and come with some discussion points on how the article could be written differently. For your journal club presentation, you will be assessed based on your presentation of the methods, hypothesis, and results and your preparation of visuals. There is a folder on the Canvas site with example presentations and some guides to help you read and interpret a scientific publication.

**Presentations:** Several weeks throughout the semester each team will be expected to give a 10-minute presentation on their progress for their project. Each team member is expected to contribute in terms of the work as well as the presentation slides. At the end of the presentation's questions will be asked by both the instructors and other peers.

**Notebooks:** The notebooks can be either done on an electronic format – word, latex, etc. or you can have a handwritten notebook. The notebook should follow the VIP guidelines listed here: <https://www.vip.gatech.edu/vip-notebooks>. If you would like to see an example e-notebook, there is one in the files section on canvas. You will turn the notebook in mid-semester and the TA will give comments for you to improve on as well as a temporary grade. This grade can be improved by making the listed changes.

**Final Report:** The final report will serve as a helpful document for the team continuing the project next semester. This report should essentially be your final presentation slide with descriptions in a word documented form that is well

documented. This will assist with the following teams in understanding what the project is and how to continue the project. There are examples of final reports in the files portion of Canvas.

### Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

A - Excellent	90-100%
B - Good	80-89%
C - Satisfactory	70-79%
D - Passing	60-69%
F - Failure	0-59%

At Georgia Tech, grades are awarded on a scaled of A-F with no +/- grades permitted. Many of the grades in this course are based off your participation in the class and participating in the group meetings outside of class.

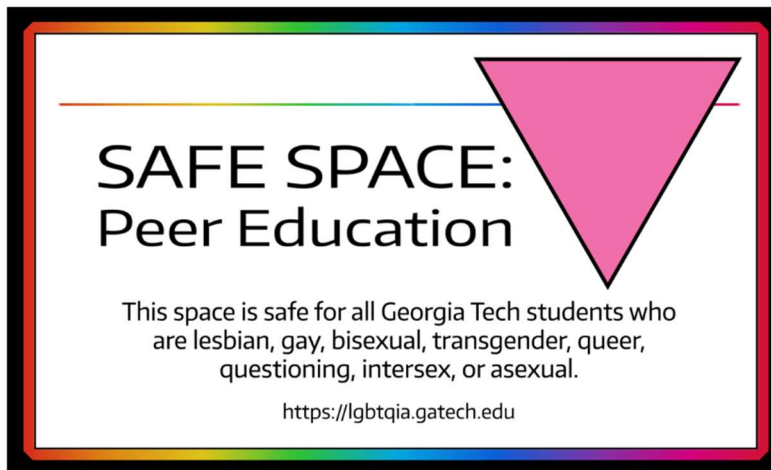
### Additional Course Material

#### Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

#### Statement of Inclusivity:

As a member of the Georgia Tech community, I am committed to creating a learning environment in which all my students feel safe and included. Because we are individuals with varying needs, I am reliant on your feedback to achieve this goal. To that end, I invite you to enter into dialogue with me about the things I can stop, start, and continue doing to make my classroom an environment in which every student feels valued and can engage actively in our learning community. It is important that this classroom and office hours/meetings are a Safe Space for those in the LGBTQIA+ Community.



#### Statement on Student Wellness:

Take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep, and taking some time to relax. This will help you achieve your goals and cope with stress. I (Andrew Schulz) try and maintain my wellness by cooking with friends, going to Hapkido classes at the CRC, and meeting with my therapist.

All of us benefit from support during times of struggle. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is almost always helpful.

If you or anyone you know is experiencing academic stress, difficult life events, or is feeling anxiety or depression. I will personally talk with you and walk you to the university resources that can help.

If you have questions about this or your coursework, please let me know. Thank you and have a great semester.

### **Accommodations for Students with Disabilities**

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)-894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

### **Academic Integrity**

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations

## Course Schedule

Below is a list of the preliminary course schedule for everyone. If you have any questions let me know.

<b>Week:</b>	<b>Date:</b>	<b>Topic:</b>
1	August	Conservation 101 & Intro to VIP – Andrew Schulz
2	Etc.	Project Deliverables & Team Q&A – Andrew Schulz/David Hu
3		Scientific Writing & Reading/ Journal Club Exp/Sponsor Connection – Andrew
4		IACUC 101/JC1/Team Meetings
5		<b>Zoo Atlanta Visit</b>
6		JC2/One Slide Presentations
7		Conservation Speaker – Mammals (Nate/Kenn/etc.)
8		JC3/Team Meetings/Communication to Public – Rachel Davis (VP Comm. Zoo Atlanta)
9		<b>Midterm Presentations</b>
10		JC4/Team Meetings
11		Conservation Speaker – Herpetology (Mark/Joe/Robert)
12		JC5/Team Meetings
13		Conservation Speaker – USFW
14		JC6/Team Meetings
15		<b>Final Presentations</b>