

Animal Behavior - BIO-50-304-02

Contributes to Animal Studies Minor

Fall 2020 Class - Tuesday and Thursday nights

In Person - Fondren Jones 100 - 7:30 - 8:30 pm

Synchronous - Ring Central on-line - 9:00 - 10:30 pm

<https://meetings.ringcentral.com/j/1499748962>

Office Hours: Simply as requested; Just email or text for assistance

Dr. Romi Burks, Professor of Biology

burksr@southwestern.edu; Phone: 512-869-8098; Website: www.profromi.com

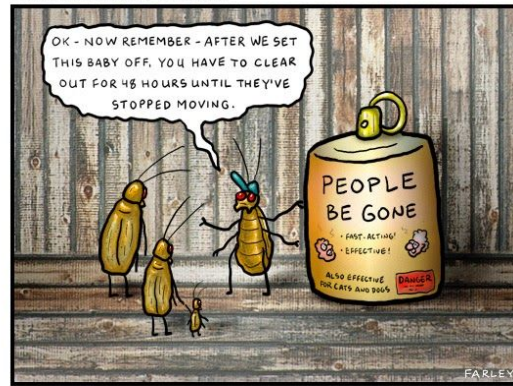
DOCTOR FUN



10 June 98

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<http://sunsite.unc.edu/Dave/dr/fun.html>
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DOCTOR FUN

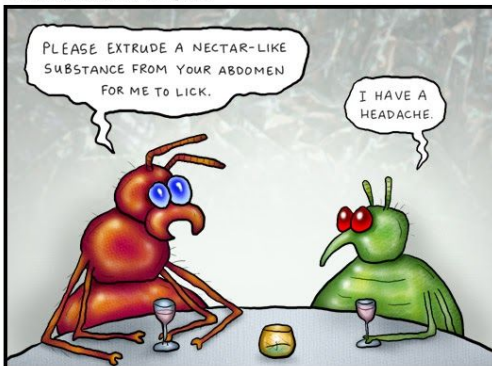


28 July 98

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When roaches have had enough

DOCTOR FUN

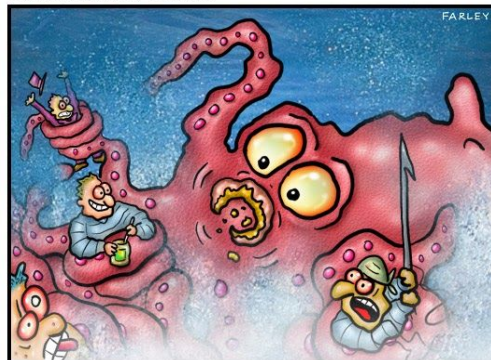


13 Oct 2000

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When ant/aphid relationships begin to lose their magic

DOCTOR FUN



12 Aug 98

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"Hey! Don't you know it's cruel to feed peanut butter to a giant squid?"

As inferred from the cartoons above, our course in **ANIMAL BEHAVIOR** will include focus on a several themes, among those:

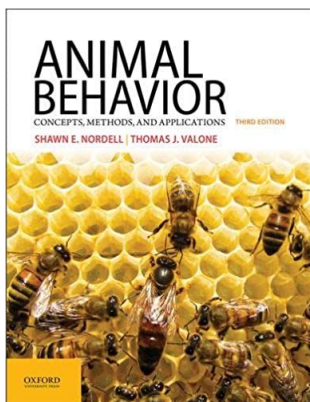
1. Impact of domestication as well as the return to feral conditions;
2. Human tendency to anthropomorphize animal behavior;
3. Animal behaviors derived from coevolutionary relationships; and
4. Ethical standards associated with animal behavior.

ANIMAL STUDIES MINOR:

This course fulfills one of the required courses from either the psychology list or the biology list depending on which section you are registered. The Animal Studies Minor engages with classic studies of animal behavior as well as emerging research in critical animal studies. This course in particular discusses a number of different perspectives from a more traditional view of animal behavior. Specifically, students will explore the scientific study of animal behavior as well, as use of animal models of human conditions.

AB LEARNING OBJECTIVES: By the end of this course (or within the year after), students will be able to:

1. **SHOW VISION:** Broadly consider how an animal experiences the world without so much anthropomorphizing (umwelt);
2. **SHOW VISION:** Better evaluate their own interactions with animals using knowledge gained by reviewing the fundamentals of animal behavior;
3. **SHOW VISION:** Understand different “whys” (mechanisms) for behavior;
4. **DEMO SKILL:** Demonstrate fluency in performance of basic AB observations;
5. **DEMO SKILL:** Gain some experience in R for data analysis and graphing;
6. **DEMO SKILL:** Improve their ability to translate the primary literature;
7. **DEMO SKILL:** Increase their confidence/experience with oral communication;
8. **TAKE ACTION:** Apply skills to data analysis to quantify variation;
9. **TAKE ACTION:** Contribute to improving the well-being of animals in human-dominated environments; and
10. **TAKE ACTION:** Connect art, science & communication using animal behavior.



TEXTBOOK - Required -

Animal Behavior: Concepts, Methods, and Applications 3rd Edition

by Shawn E. Nordell (Author), Thomas J. Valone (Author)

ISBN-13: 978-0190924232

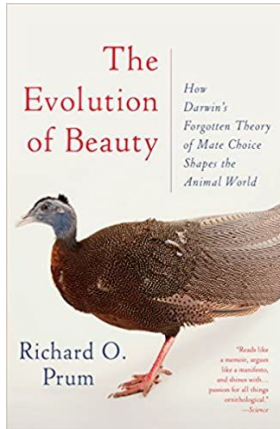
ISBN-10: 0190924233

Paperback: \$112.95; available from SU Bookstore and website:

<https://global.oup.com/ushe/product/animal-behavior-9780190924232?cc-ca&lang=en&>.

E-book also available for: \$56.48:

<https://redshelf.com/app/ecom/book/1602965/animal-behavior-1602965-9780190086268-shawn-e-nordell-thomas-j-valone>



PHI BETA KAPPA SPEAKER COMING TO SU

“The Evolution of Beauty: How Darwin’s Forgotten Theory of Mate Choice Shapes the Animal World - and Us” (2018)

by [Richard O. Prum](#)

Paperback: 448 pages

Publisher: Anchor; Reprint edition (April 3, 2018)

Language: English

ISBN-10: 0345804570

ISBN-13: 978-0345804570

How Class will Generally Work:

- **Tuesdays - 7:30 - 8:30 pm** - in person (IP) class time with Dr. Burks to learn methods in Animal Behavior and data analysis.
- **Tuesdays - 9:00 - 10:30 pm** - synchronous class on-line (OL) in Ring Central where we review content material - mix of Burks and CHaRGe teams.
- **Thursdays - 7:30 - 8:30 pm** - in person (IP) class time with Dr. Burks for Q&A, more quantitative work and five primary literature presentations/discussions - mix of Burks and PLuG trios.
- **Thursdays - 9:00 - 10:30 pm** - synchronous class on-line (OL) in Ring Central with additional engagement activities including debates (some prep-time included), documentaries, guest speakers and project presentations. The last 10 minutes of class on Thursdays nights will be a look at activities and responsibilities for the following week.

Majority of work due Tuesdays to allow quality time for thought between classes. Primary literature work will take place on Thursdays.

Brief Explanations of Course Components (please refer to accompanying assignment guides for detailed instructions and rubrics):

1. **Online Lab Notebook (25%):** Each student will create and contribute to an **Organized Google Document** (Copy Template which uses the Bookmark function to link to different sections) that they share with me. These notebooks will be your place to “deposit” ALL of the engagement that takes place associated with Animal Behavior class and will be turned in a total of 6 times.. **Every entry should have a date.** Things that **must be included** in your notebooks include:
 - a. **Each period: Activity Log** - what you did and how long it took you

- b. **Once by midterm, once before final: "ZooCam"** - biweekly observations (10 minute observation period)
- c. **Periodically: Data tables** (or clear links) to observational data both independent and during class.
- d. **Periodically: Ethograms** (ultimately 2) - "cricket" and then one of your own choosing (live, webcam or minimum 30-minute video).
- e. **Routinely: *The Evolution of Beauty Reflections*** (at least 500 words for 6 of the 12 chapters)
- f. **Periodically: Some limited R Code**
- g. **Routinely: Guest Speaker Reflections** (at least 300 words for 5 of 7 guest visits)
- h. **Routinely: Goosechase** work which includes noting behaviors in the videos, contributing an additional Mission to Goosechase (include the clue and link in your log and I'll move it to the online scavenger hunt) and keeping a two-week running total of points on Goosechase.
- i. **Once:** Need to highlight a BIPOC (Black, Indigenous, Person of Color) Animal Behaviorist by the last journal submission. **The Scientist Spotlights Initiative** empowers middle/high school, college, and university science educators to implement inclusive curricula that help ALL students see themselves in science. We provide access to easy-to- implement assignments/activities that link course content to the stories of counter-stereotypical scientists. <https://scientistspotlights.org/submit-spotlight/>
- j. **Other:** course notes on what works and what does not
- k. **Reflections:** anything else you want to share

Note on Goosechase: We will use the on-line scavenger hunt Goosechase to liven up the class with amazing animal videos. We can always talk about those videos in class. Students should stay within 50% of the leader to qualify for good participation.

2. **Ethics Debates (and Discussions) (15%):** We will have three debates during the semester. Debates will have an expected template and students will be expected to prepare their thoughts and also be able to argue either side of the issue. The rubric will detail the grading associated with the debates. The first debate will be asynchronous (on-line Google Doc). The second debate will take place on-line during class time. Students will vote on the topics of the debates as well as the format for the third debate. Possible topics include:
 - a. Should we have zoos?
 - b. Should we ban animal testing of pharmaceutical drugs?
 - c. Should we allow people to own exotic pets?

- d. Should we reintroduce wildlife to reserves where they were extirpated?
3. **Chapter Reviews (20%):** Each student will be randomly assigned to a CHaRGe - Chapter Review Group. As a trio, you will prepare and deliver chapter "highlights" to the class using only 20 key slides. Each group will do two chapters and the materials/responsibilities for this work need to be shared equally. Students will receive the lecture PointPoint slides (including Figures) and supplemental material from the textbook.

Chapter Reviews have 5 content expectations:

- a. Review material from the chapter and make it "matter" (30 min)
 - b. Include video analysis activity that highlights key concepts (10 min)
 - c. Engage class in high-quality Kahoot review exercise (15-20 mins)
 - d. Provide a one-page review sheet to share with peers
 - e. Add two missions to Goosechase (provide clues and links to me)
- "Call Your Professor" - Note that students can request that I (Dr. Burks) cover one section/concept within the chapter that they find confusing or difficult.

4. **Quantitative Work (10%):** In-class time will work on exploring the quantitative problems found in your textbook and working through exercises in Swirl/R. Students should be able to complete most of the quantitative work in class. As noted below, these activities will be graded on a modified completion scale. Any assessments of in-class quantitative work that take longer than the class period will be due on the following Monday by noon.
5. **Primary Literature Analysis:** During five class periods, we will examine primary literature papers from various topics in Animal Behavior including:
 - a. PL 1: Evolution/Behavioral Genetics
 - b. PL 2: Communication
 - c. PL 3: Learning/Foraging
 - d. PL 4: Antipredator
 - e. PL 5: Sexual Selection or Mating Systems

These topics correspond with the content in the textbook but may integrate several areas. In consultation with Dr. Burks, a trio will be responsible for selecting a paper to dissect and discuss. They will do a detailed analysis of the paper ahead of class ([see Template on Google Drive](#)). All papers must be peer-reviewed primary literature and approved at least one week in advance.

The rest of the students in the class will be responsible for bringing a minimum of 2 thoughtful questions to class and the correct APA citation for the paper (**submit within Box on Moodle**). Given the inability for students to present from the front of the class, Dr. Burks will lead the discussion of each paper, but the trio will also be expected to contribute **orally. This will take intent and patience.** The goal will be to integrate discussion of the paper and make sure that everyone's questions get discussed. The analysis and participation of the trio will be worth 55% of the points allotted for this skill and the questions 45%. Students will get one "pass" of having questions for one of the papers (so, present 1, do questions for 3, one free).

6. **Creative Value Project (10%): Umwelt Perspective or Book Club:**

- a. **Option 1: Umwelt** - Create an intentional "work" about the animal behavior that integrates material you have learned across your experience and educates the public audience by showcasing the concept of the umwelt. As a means of pushing you to think creatively, the form of value projects will remain pretty wide open [persuasive essay, poetry, informative educational flyer, art piece, social media campaign, video, etc...] but must focus on the perspective of the organism.
- b. **Option 2 - Book Club Project Overview:** Boardgame, talk show, Ted/Ellen talk, movie trailer, etc. Groups can choose to present their book in any method listed above, or in a method not listed but approved by Dr. Burks (one group per method).

Southwestern's signature program, Paideia, focuses on three I's: Interdisciplinary, Intentional and Integrative. These three I's describe an ideal creative value project. Projects will include four parts: proposal, mid-way check, final project & reflection.

Student Learning Objectives/Outcomes - Umwelt: students will be able to:

1. Educate an audience about the concept of umwelt;
2. Increase their ability to consider the perspective of the animal;
3. Tap critical thinking skills to examine the influence of animals on humans
4. Foster creativity by creating some type of engaging piece.

Student Learning Objectives/Outcomes - Book Club, students will be able to:

1. Apply the concepts covered in class to a novel situation
2. Engage in the art of storytelling as a means towards conservation biology;
3. Work together cohesively in a team; and
4. Use creativity to communicate the book's content and engage the audience.

7. **Take Home Final (10%):** The final exam will be take-home and consist of 7-8 short essay questions and students will need to answer 5 of them. I encourage students to develop questions over the course of the semester.

Grading & Turning in Work: Note that Online Lab Notebooks and Quantitative Worksheets (25% + 10% = 35% of the course) will be graded on a simple modified completion scale that accounts for effort and quality: Not Sufficient (D); Good (C); Great (B); Fabulous (A). A final number of points will be awarded based on the cumulative evaluations of these works.

As usual for my upper-level classes, there will be 1000 points available. Overall, I will convert grades to a percentage out of 100. Partial credit in increments of 0.5 points may be given. If a final grade has an additional 0.5 points, then I will round up. Points will be converted to letter grades based on the following scale:

- 98 -100 = A+; 93 - 97 = A; 90-92 = A-;
- 87-89 = B+; 83-86 = B; 80-82 = B-
- 77-79 = C+; 73-76 = C; 70-72 = C-
- 67-69 = D+; 63-66 = D; 60-62 = D- Below 60 = F

All work will be graded electronically and grades will be kept updated in Moodle.. Acceptable ways to turn in work include Google Docs, Microsoft Word (not Pages) and as a PDF if necessary (more difficult for me to provide feedback). Students will be responsible for returning to assignments for feedback. If you have technical difficulties finding the feedback, then please inquire with me.

Overview of Coursework - subject to change with class discussion

	Course Components	Frequency	Graded	Dates	% Grade	Pts
1	Google Doc online lab notebook: worktime, class notes, zocam, observations, ethogram, guest speaker reflections,	5 Times Every 2 weeks (½ class rotation)	Individual	Due Tues Daily -ish	25	250 ~40 pts per review
2	Ethics Discussion/Debate	3 Times During Semester	Individual	Thurs Online Time	15 (5% x 3)	150 50 x 3
3	Chapter Reviews: 20 slide lecture,, highlight videos,	Occur Weekly 2 per group	Trios	Tues Online Time	20 (10% x 2)	200 100 x 2

	contribute 2 missions to Goosechase, Kahoot review & sheet					
4	Quantitative Work: In-class work	Weekly-ish	Mostly individual In Class	Tues Inclass Time	10	100 #tbd
5	Primary Literature Choice and Questions	5 Times During Semester	Trios	Thurs Inclass Time	10	100 T-55 3 x 15
6	Creative Value Project - Umwelt or Book Club	One project; 4 Parts	Individual or Trio	End Thurs	10	100 (10, 20, 60, 10)
7	Take Home Final	Once	Individual	12/18	10	100

10 WAYS FOR ME TO BE A BETTER TEACHER (online but also in-person):

From - <https://www.chronicle.com/article/how-to-be-a-better-online-teacher/>

1. **Show Up to Class** - I'll be there and I'll stay a few minutes for personal, in-person but socially distanced questions.
2. **Be Yourself** - No problem there - what you see is what you get. I'm very straight-forward and no nonsense.
3. **Put Yourself in Students' Shoes** - I get this. Shorter attention spans. A lot more to juggle. Pandemic fatigue. Will try to make the best of everything together.
4. **Organize Course Intuitively** - Ok. See above. Will follow book chapters and keep Moodle up-to-date. When in doubt, ask.
5. **Add Visual Appeal** - Not a problem here, lots of cool videos to watch and I love cartoons that we can add..
6. **Explain Your Expectations** - Noted. Often do this verbally and also recap in Moodle Announcements and detail on Rubrics. Will have Q&A time.
7. **Scaffold Learning** - Keeping this in mind as I think of ways to build assignments and also connect between projects.
8. **Provide examples** - In terms of student work as a guide, this one is a little easier said than done as AB represents a new course but I'll try to remember.
9. **Make Your Class An Inviting, Pleasant Place to Be** - Open to suggestions here.
10. **Commit to Continuous Improvement** - Absolutely - I consider all teaching an experiment with "tweaks" often needed.

OPEN COMMUNICATION: Students are expected to discuss questions and areas of concern with Dr. Burks. This is even more important during these unusual times. Please check your email on a regular (at least daily) basis.

IN PERSON ETIQUETTE: Be a good citizen and follow the rules.

- Mask always.
- Clean your desk area before class.
- Maintain 6 ft. social distance.
- Keep the desk arrangements as you find them.
- Bring a laptop (if this is a difficulty for you, let me know).
- Practice talking while masked. Note the volume required.
- Do not hesitate to ask someone to repeat themselves (me included).
- Be patient.
- Bring your Emoji stick.

ON-LINE ETIQUETTE: Teaching this course as an upper-level is a first for me (I've certainly taught aspects of Animal Behavior in other courses). Teaching part in-person and part-in on-line (called Hyflex) also represents a first. You can learn some more about Hyflex instruction here:

<https://instructionalcontinuity.georgetown.edu/guides/hyflex-teaching/>

Please take a look at this site for a sense of the desired learning environment.

Fortunately, I have plenty of experience of teaching in longer blocks of time and integrating online activities. I'm very comfortable with planning class periods that include several activities. Some may take more or less time than expected so we will maintain some sense of flexibility.

1. All class periods will start in person in Fondren Jones. The second half of class will be in RingCentral which is a Southwestern version of Zoom after a break of 30 minutes to allow everyone to re-situate.
2. Students will receive an email invitation to RingCentral reminder before class ("permanent" class link at top of syllabus).
3. All materials or links for class will be posted on Moodle.
4. All class meetings will be recorded.
5. Official class emails will come from Moodle.
6. All students should try their best to keep their cameras "on" during class. It makes you more accountable. *I understand that some privacy issues may prevent this from occurring and can respect those circumstances. If you do not want to have class in your personal space, I'd prefer you reserve a room in the library. In those cases of no camera, students will need to make additional efforts to show engagement (in chat for example). Exceptions for on-camera time may include unexpected interruptions, needed restroom breaks, etc...*
7. Generally microphones should be "muted" by students to limit external noise/feedback. However, students should always feel free to "unmute" and interrupt or ask questions. Dr. Burks will generally maintain her microphone

unmuted.

8. Students will be expected to engage in the chat, especially when asked for check-ins from Dr. Burks. Individual chats can also be sent.
9. Students can put an "X" in the chat to indicate an interest to speak or use the "hand-raising" function in RingCentral.
10. Any technical difficulties, please text 512 869 8098.

IMPORTANT DATES:

October 13 Tuesday - Last day to drop courses without record or P/D/F change

November 16 Monday - Last day to drop courses

WORK OUTSIDE OF CLASS: I plan to do as much work *in class* as possible. Generally, student work will be due on **Tuesdays** to provide students with more time to complete the work between classes. I would expect *the equivalent amount of work out of class for the time in-class*, so I would plan for an average of three hours of outside work per class period. This majority of this time will likely be divided between reading the chapter and contributing to your online lab notebooks. Please keep a log of your work as part of your participation. **If workloads start to fall outside of this expectation, then we'll adjust.**

LATE WORK/FLUID DEADLINES: I will try to be as fluid as possible with deadlines. However, please note that if no deadlines exist, then everyone will procrastinate. If you anticipate not meeting a deadline for legitimate reasons, please ask for an extension **at least 24-hours in advance**. Group work associated with primary literature presentations and chapter review session materials need to be completed **on time**.

EMAIL: I will frequently e-mail to remind you of deadlines or to clarify points from a lecture. Please check daily.

MOODLE: Southwestern uses an interactive course management system called Moodle. We will use Moodle to share materials, track grades, and often submit assignments. You should automatically be loaded into the system and can access Moodle via the SU Portal or directly at lms.southwestern.edu. Your username and password is your regular SU electronic ID (same as your email). With any technological application, sometimes things can go awry. Melanie Hoag (hoagm@southwestern.edu, x1644) can be of assistance with any Moodle difficulties.

ATTENDANCE: A lot of effort has been made to conduct in-person classes at Southwestern and upper level biology courses with a lab meet for a considerable time each week. Also be aware that night class may add some additional distractions (TV, parties, food, etc...) that could try and pull you away from class. In general, I encourage you to attend class whether in person or on-line **BUT ONLY ATTEND CLASS IF AND ONLY IF YOU FEEL GOOD. WHEN IN DOUBT, STAY HOME.**

Please note:

- Attendance records will be kept for in-person classes for contact tracing - you will **enter your attendance weekly on Moodle** (near top of class page).
- **Attendance itself is not directly part of your grade.** Your engagement and participation will largely be assessed through your online lab notebook and your contributions to class components.
- If you think you may have had close contact with an infected person, begin quarantine in your own room immediately and call the COVID-19 Care Coordinator at 512-863-1605.
- If you develop any symptoms of COVID-19 (esp. fever, cough), call the SU Health Center at 512-863-1252 to schedule an appointment.
- If you need assistance in getting medical care, contact your Resident Assistant or SUPD at 512-863-1944.
- Do your best to communicate with me.
- Designate a peer to communicate updates if that is easier.
- Do not worry about missing class if necessary. I promise to work individually with everyone on a case-by-case basis.

SELF-CARE: College life is great, but also stressful and demanding, especially now.. College life under the umbrella of covid is a new frontier. Keep in mind that **nothing is as important as you and your support system.** Take care of yourself first and then you can be there to help others.

Some Self-Care Basics
<ul style="list-style-type: none"> ● Prioritize ● Stick to a routine ● Don't skimp on the basics (eat, sleep, move) ● Stay connected ● Limit news consumption ● Be mindful of substance use ● Practice mindfulness and other relaxation techniques ● Cut yourself some slack ● Watch for signs of trouble in yourself ● Check in with friends and other supporters <p>Reference: https://www.apa.org/monitor/2020/07/self-care</p>

ATTENDANCE RELIGIOUS AND CULTURAL TRADITIONS: Southwestern University recognizes that it has students from a variety of religious and cultural traditions that have special days of observance or celebration that may take students out of their regular activities on certain days during the school year.

1. *As far in advance as possible, the student is expected to notify the professor(s) or instructor(s) of the class(es) to be missed.*

2. *The student is expected to learn what assignments or exams are due or will be assigned on those dates and negotiate with the professor(s) or instructor(s) alternate times for fulfilling those requirements.*

3. *Students should be prepared to fulfill the requirements prior to the class(es) to be missed.*

HONOR CODE: You must complete all work independently unless otherwise noted by Dr. Burks. As all work will be electronic, you must type out the honor pledge IN FULL on all assignments.

I have acted with honesty and integrity in producing this work and am unaware of anyone who has not.

Please take responsibility for taking care of this; I will not chase you down if you forgot the pledge. On electronic submissions, you must have it on your submission (the best practice is to place in the Heading followed by your initials). If you are unclear on the concept of plagiarism or cannot sign the honor code in good faith, please see Dr. Burks. When in doubt, paraphrase and cite the [BIOLOGY CITATION GUIDE](#). Any perceived impropriety will be discussed with the student and appropriate action taken. **All citations in this course should use APA style.**

WRITING HELP: Besides feedback from your peers and myself, Southwestern provides a number of resources aimed at improving your writing including the [Debby Ellis Writing Center where individual consultation appointments are available.](#)

FACEBOOK/SOCIAL MEDIA POLICY: All official class information goes through Moodle or myself to your SU email. If someone wants to take the initiative to make a group, I am in favor of group studying and brainstorming. I'm happy to be "A Friend" with SU students with the knowledge that I am a faculty member at Southwestern first and take that seriously. If I see something that worries me, I will follow up. I believe in better safe than sorry. At the same time, I'm certainly not in the habit of checking up on students but cannot help but read updates when posted. My Profile page is all- inclusive for my friends, family and some students. I do not post anything there that I am not willing to publicly share (this is good advice). So, if you would like to request to be my friend, I will certainly accept but I do not want to compel people. As another social media alternative, you can follow me on Twitter @ProfRomi.

ACCOMMODATIONS: *Southwestern University will make reasonable accommodations for persons with documented disabilities. Students should contact the Center for Academic Success and Records to determine their eligibility to receive*

accommodations."

Official accommodation notification should be communicated as soon as reasonably possible. Beyond this, we all need some version of accommodations to make our class space accessible, because we all learn in different ways. Please feel free to manage your classroom experience in the way best for you. Reasonable requests will always be carefully considered for feasibility and equity.

- ❑ Library and Academic Support services - [Academic Success website](#) and the "[Support During COVID-19](#)" section of that website.
- ❑ Technical / computer help support services - Students can receive technical support through the InfoDesk. They can call the support line (512.819.7333) or send an email to infodesk@southwestern.edu. Support is available M-F, 8-12 and 1-5.
- ❑ Counseling / health support services - See [Counseling Center](#)'s website.

GROUP WORK: All students are expected to contribute equally to group or pair projects.

FOOD: Please avoid eating anything during in-person class (you can sip water) and be reasonable during on-line parts of class. Eat dinner **BEFORE** class.

CRITICAL READING GUIDELINES: Given the crazy variety of animal behaviors to explore, it will be difficult for this class not to be fun. However, whether you will enjoy and learn a great deal from this class is almost entirely up to you and your commitment to reading the course materials and engaging in activities.. Thoughtful reading is both active and responsive. As a general rule, thoughtful engagement either: (a) uses readings and/or videos as the basis for formulating interesting discussion questions; (b) uses readings and/or videos as a basis to develop an interesting positive argument of your own; and/or (c) treats an author/work as an opponent worth refuting.

Tentative Syllabus:

Updates will be made on this Google Drive version but you should refer to Moodle for the latest information

Wee k	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
1	9/8	Tues	OL: Observations 101; Syllabus	Burks	
	9/8	Tues	OL: Ch 1 Science of Animal Behavior (AB) - Tinbergen's Four Questions	Burks	
	9/10	Thurs	IP: Introduction to R and Swirl	Burks	SyllQuiz
	9/10	Thurs	OL: Ch 2 Methods for Studying AB	Burks	
Wee k	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
2	9/15	Tues	IP: Data Entry into R	Burks	
	9/15	Tues	OL: Ch 3 Evolution & Study of Behavior	Burks	
	9/17	Thurs	IP: Crickets & Ethogram	Burks	
	9/17	Thurs	OL: Q&A Ch 1-3 + Online Debate Prep	All/Burks	
Wee k	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
3	9/22	Tues	IP: Descriptive Statistics in R	Burks	J:A-H
	9/22	Tues	OL: Ch 4 Behavioral Genetics	CHaRGe A	
	9/24	Thurs	IP: Primary Lit 1 - Evolution or Beh Gen	PLuG 1	
	9/24	Thurs	OL: Dr. Grant Hildebrand, NPS	Guest	
Wee k	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
4	9/29	Tues	IP: Introduction to the Umwelt	Burks	J:M-Z Debate
	9/29	Tues	OL: Ch 5 Sensory Systems & Behavior	CHaRGe B	
	10/1	Thurs	IP: TBD: Buffer Time; maybe more R	Burks	

	10/1	Thurs	OL: Careers in AB: Vet Panel	Guests	
			Drs. Jen Penland, Dr. Stephanie Russell Beeson & Dr. Janae Umbaugh		
Week	Date	Day	Class Activity	Leaders	Due
5	10/6	Tues	IP: Milk Snail Observations	Burks	J:A-H
	10/6	Tues	OL: Ch 6 Communication; Debrief Debate	CHaRGe C	
	10/8	Thurs	IP: Q&A Ch 6; Prim Lit 2 -Communication	PLuG 2	Proposal
	10/8	Thurs	OL: Ellen Sproule + Cassidy McClain Alessandre		
Week	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
6	10/13	Tues	IP: R and Graphing	Burks	J:M-Z
	10/13	Tues	OL: Ch 7 Learning	CHaRGe D	
	10/15	Thurs	IP: Q&A Ch 7 + R Time - Results	Burks	
	10/15	Thurs	OL: Niki Bertrand	All	
Week	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
7	10/20	Tues	IP: Inverte Predation "Lab"	Burks	J:A-H
	10/20	Tues	OL: Ch 8 Foraging	CHaRGe E	
	10/22	Thurs	IP: Q&A Ch 8 + PL 3 - Learning/Foraging	PLuG 3	
	10/22	Thurs	OL: Dr. Kelly Finn + Debate 2 Prep	Guest/All	
Week	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
8	10/27	Tues	IP: Buffer: More data analysis	Burks	J:M-Z
	10/27	Tues	OL: Ch 12 Sexual Selection	CHaRGe C	
	10/29	Thurs	IP: Evolution of Beauty Book Disc. Prep	Burks	
	10/29	Thurs	OL: Synchronous Debate 2	All	

Week	Date	Day	Class Activity (IP - in person; OL = online)	Leaders	Due
9	11/3	Tues	IP: Rolly-Polly "Lab"		J:A-H
	11/3	Tues	OL: Ch 10 Dispersal Migration	CHaRGe D	
	11/5	Thurs	OL: PBK Guest Dr. Richard Prum		
	11/5	Thurs	IP: Tentative - Debate 2 Debrief	All	

Week	Date	Day	Class Activity	Responsible	Due
10	11/10	Tues	IP: Data and R Time	Burks	J:M-Z
	11/10	Tues	OL: Ch 9 Antipredator	CHaRGe E	
	11/12	Thurs	Q&A Ch 9 + Prim Lit 4 - Antipredator	PLuG 4	
	11/12	Thurs	OL: Debate 3 Prep + Abstract Review	Burks	

Week	Date	Day	Class Activity	Leaders	Due
11	11/17	Tues	IP: In-class Abstract Writing (2 of 3)		J:A-H
	11/17	Tues	OL: Ch 13 Mating Systems	CHaRGe A	
	11/19	Thurs	IP: Q&A Ch 13 + Primary Lit 5 - Mating	PLuG 5	
	11/19	Thurs	OL: Dr. Fay Guarraci	Burks/Guest	

Week	Date	Day	Class Activity	Leaders	Due
12	11/24	Tues	IP: No Class - Comp for Asynchronous		
	11/24	Tues	OL: No Class - Comp for Asynchronous		
	11/26	Thurs	No Class - Thanksgiving - everyone goes home		

Week	Date	Day	Class Activity - all online	Leaders	Due
13	12/1	Tues	OL Only: Ch 11 Game Theory (Burks) + Ch 14 Parental Care (Group)	Burks + CHaRGe B	J:M-Z
	12/3	Thurs	OL: Debate 3 (Synch/Asynch DeBrief)	All	
Week	Date	Day	Class Activity - all online	Leaders	Due

14	12/8	Tues	OL Only: Ch 15 Sociality & Ch 16 Cooperation	Burks	J: All
	12/10	Thurs	OL Only: Value Projects and Book Club Presentations	All	
	12/18	F pm	TAKE HOME FINAL DUE		