

GENERAL ZOOLOGY (BIOLOGY 120) COURSE SYLLABUS

Instructor: Dr. Tupper

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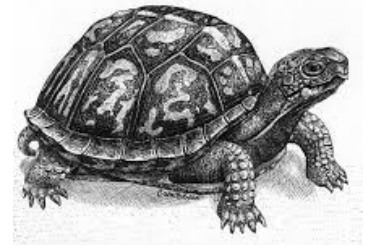
Website: <http://blogs.nvcc.edu/ttupper/>

Facebook: <https://www.facebook.com/nvcczoology/>

Office hours: TBA

Lecture Section: 040N (CS 131)

Lab Section: 0C1N (CS 134)



Course description and general purpose: Presents basic biological principles, emphasizes structure, physiology, and evolutionary relationships of invertebrates and vertebrates. This is a four-credit, one-semester course for science majors, or nonmajors. In it, students are introduced to the evolution of animals from the Paleozoic to the present. Emphasis is placed on evolutionary relationships, anatomical and physiological characteristics of major phyla, and how they fit into their respective environments. This course, coupled with botany, satisfies the biodiversity requirement (plus 4 biology elective credits) for biology majors at George Mason University.

Textbook: Miller SA, Tupper TA. 2023. Zoology, 12th Edition. McGraw Hill. Because the 12th edition is substantially different from the prior editions, it is what we use. This can be purchased at [the NVCC Annandale Campus bookstore](#).

Field guide: Alden P, Cassie B. 1999. [National Audubon Society Field Guide to the Mid-Atlantic](#), 1st Edition. Knopf. 0-679-44682-6. Available in the NVCC Annandale bookstore. You can purchase directly from the Audubon society too. Also, you can use alternate sources or field guides to learn the animals. Normally I have a lot of these to lend out to students. However, because covid hit, many of the copies that I lent out never made it back to campus. I recently purchased 9 new copies, and I can lend them out. Please be sure to return these at the end of the semester so that others who may be financially constrained can use them.

Competencies: The student should be able to read and express themselves both orally and in writing on a college freshman level as measured by a college English competency examination (ENG 111 or permission of instructor).

Field trip: We have a day-long field trip to the [Smithsonian Environmental Research Center](#). This field trip is led by me, and a highly accomplished Smithsonian biologist, Robert Aguilar. Please wear appropriate attire. This includes long sleeves, long pants, and hiking boots. If you have long hair, put it up, and under a hat. Lastly, please read the links posted on canvas about chiggers, Lyme disease, poison ivy, west Nile virus, and certain other tick-borne diseases. Bring a snack, water, and some hand sanitizer. The trip will be on either September 16th or 17th, depending on the weather. If both of those days are bad, we'll try October 14th or 15th. I'll know the exact date and rain date by the time the semester begins. Bring AOR and COC forms, signed. The field trip will be confirmed by email on the morning of the trip. This extra credit assignment is worth 50 points and corresponds with the field identification quiz at the end of the semester.

My personal research: Please visit my website to learn [about me](#). You'll notice that I am pretty active in biology and that my area of interest is conservation biology, and biological inventory and monitoring (herpetology and herpetological diseases). Together with [Dr. Christine Bozarth](#), [Dr. David Fernandez](#), and Prof. Lauren Fuchs I have been able to create a functional research program at NOVA. As NOVA students, you have a chance to become involved in my work. However, there are some prerequisites that we can discuss in person should you be interested. You'll probably also notice that I am the co-author of our textbook. I get questioned about this repeatedly so I will just state this right here: I do not receive royalties for this work. I am not the lead author, and I was brought in to help improve the quality of work for the 10th edition. The reason that I require the latest edition of the book is that it is substantially different from prior editions. The field of zoology is dynamic. The evolutionary hypotheses and our understanding of phylogenetic relationships change rapidly. So, to give you the most accurate information, I require the 12th edition. I'd like you to know that I work very hard on this book, and it is incredibly time consuming. Please take the time to read the assigned chapters and, if you feel so inclined, provide us with some feedback. The improvements made to the 12th edition are in part due to questions raised by NOVA students. Your feedback is greatly appreciated, and it matters a great deal! Also take note that

I either wrote or edited much of what you will read in the textbook, so you can rest assured that there will be congruity between what I teach in lecture, what is present in the lecture slides, and what shows up on your exams.

Evaluation: Your final grade will be based on 4 lecture exams, attendance, assignments, lab attendance and activities, and 3 lab exams. Lecture exams consist of multiple choice, short answer questions and/or essay questions. Lab exams are identification-based. Your final grade = points received/points possible x 100. There are a total of 1095 points possible in this course (plus 100 points of extra credit). There are no make-up exams, and no exam grades are dropped. All lecture exams are timed, open notes, and are to be taken at home via canvas. Lockdown browser and monitor are required. You will have a one-week window to take the lecture exams. If anyone objects to using monitor, please let me know, and we will move to synchronous in-person exams. Notes must be handwritten hard copies (unless you have accommodations). Late assignments, including exams, are not accepted.

Student needs: Students who may require accommodations are encouraged to contact the [college center for accommodations and accessibility services](#). If you have a memorandum of accommodation, please present that to me via email (or a hard copy). We can then discuss how I can best help you. [NOVA can help with food, bills, rent, childcare, and mental health needs](#). If you need other financial advice, please click [here](#). If you need a Sign Language interpreter or CART Captioning, contact Interpreter Services at: interpreters@nvcc.edu. If you need academic assistance or need college services but cannot make it to campus, please review NOVA's [remote student support services](#) to receive virtual assistance. Click on the following hyperlink if you are in the [military or are a veteran](#) and need assistance. If international students have specific questions, [click here](#). Complaints of sex-based discrimination, sexual violence, domestic violence, dating violence, and sexual or gender-based harassment can be [reported here](#). The campus police information is [here](#).

Academic honesty and conduct: At Northern Virginia Community College, we expect the highest standards of academic honesty. Academic dishonesty is prohibited in accordance with the Student Conduct, Rights and Responsibilities described in the [student handbook](#). NVCC's [policy](#) prohibits cheating on examinations, unauthorized access to examinations or course materials, plagiarism, and other proscribed activities. Students that violate plagiarism and academic honesty codes will be [reported](#). If a student behaves in a hostile or disruptive manner or presents any indication that they are a harm to themselves or others, a formal request for assistance to the [office of wellness and mental health](#) will be submitted, and the police may be contacted. Regarding covid/influenza: if you are feeling sick, please do not come to class. I will be unmasked while lecturing so that students can hear me. If I get sick and am out for an extended period, that will be problematic for all of us. [Click here for covid-19 updates](#).

Cancellation dates: In the event of class [cancellation](#), we will resume where we left off during the next meeting. For example, if we were to have an exam scheduled on September 1st, and there was a nationwide internet blackout, the exam would take place on our next scheduled meeting on September 7th. It would be best if you were ready to transition to that format in case of emergency. If the entire class is okay with it, exams will be remote and asynchronous. You will need access to a computer with a webcam, and you will need to download [respondus lockdown](#). [Please click here for emergency alerts](#).

Important dates, audit policy and incompletes: For critical dates regarding refunds, withdraw, holidays, etc., click [here](#). Auditing this course requires instructor permission. Incompletes are only granted if the student's circumstances are dire (e.g., health issues, family issues, documented work conflict) and if [certain criteria](#) are met. Incompletes must be approved by the division dean and provost. Health claims must be documented by medical professionals. Final exam times are different than your normal class meeting time. They are posted below.

Comments on submitting written work: I will not be assigning research papers this semester. The field trip report, however, is written. You can ask the [writing center staff](#) for help with the report, and for other classes.

Email policy and canvas discussions: Please use proper English when composing emails and posting discussions. Please keep writing somewhat formal, free of slang, and as grammatically correct as possible. Please address me in the emails as Dr. or Professor Tupper, not as "hey." It is absolutely okay to call me by my first name if you are no longer taking courses with me. I will reply to your emails within 24-48 business hours from its sent time. There are times when I miss an email, or it gets sent to my junkbox. If you do not hear from me within 48 business hours, please just email me again. Due to the

volume of emails that I receive, I may not reply to you unless you ask me a specific question. Here are some course email guidelines:

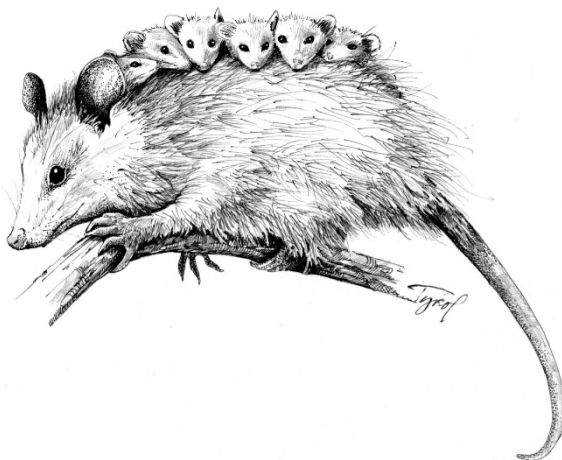
1. Email me if you have questions about the course content or if you want to set up a time to meet and discuss some of the course content. I am more than happy to help you learn the material.
2. Email me if there are serious circumstances that are beyond your control that may need my attention (i.e., health or job-related issues or conflicts that may result in a prolonged absence from class). Smaller and less serious questions can be answered by emailing a classmate, or by using canvas discussions.
3. You don't have to email me if you are going to be late to class. (But to avoid disruptions, the door will be locked 15 minutes after the class begins.)
4. You don't have to email me if you are going to miss a single class, or if you have missed a single class.
5. Please first ask your classmates or use canvas discussions to find out about any logistics/instructions that I have explained in a previous class that you did not attend. Then email me if there still is a concern.
6. Please do not email me asking for extensions on labs and other assignments.
7. Please do not email me asking for more extra credit.
8. Please email me from your official vccs email account so it does not go to spam.

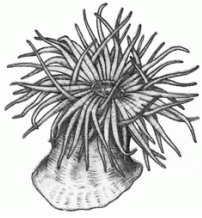

Introductory letter, general comments on success in this course, and miscellaneous rules: Please write a brief statement and include something semi-personal about yourself, (e.g., a couple of hobbies/sports/major/favorite shows). Also, if you feel up for it let us know where (if) you work and how many hours you work per week. I am sure your classmates (myself as well) are interested in knowing a little about you. Also include your name, and what you preferred to be called. Post this in canvas discussions during the first week of the class. It's worth extra credit points but must be at least 100 words. Please also submit that to the canvas gradebook.

Doing well in this course requires commitment and attendance. This course covers evolutionary biology, animal systematics, taxonomy, natural history, anatomy, and physiology. By nature, these topics can be challenging. You need to set aside time for reviewing lecture notes, reading, and studying after and before every lecture. Please make use of canvas discussions and become friendly with other students in the class. It helps calm anxieties about the course if you have some peer support. Please be on time for class. Lectures are not recorded. Recording devices will only be permitted for students who present a memorandum of accommodation.

Lastly, I like interactive courses. I tend to ask students a lot of questions. I do this because when a student explains a concept to other students (rather than just me), it can be quite helpful for learning. There's no penalty for getting a question wrong, and once you get used to my lecture style, you will see that we are in a judgement free zone where everyone is welcome to participate. That said, if you have serious social anxiety and would prefer not to be called on, just let me know. I understand.

Tentative lecture schedule: Please note that the lecture and exam dates are not fixed (except the final). Sometimes we take longer to get through the material than other times. The exam dates may change, but the material covered on each exam will not. I will let you know well in advance of each exam. Please note that the final exam meeting time is different from your normal class session. The final exam schedule is hyperlinked below.



Tentative Lecture Schedule			
(440 points possible from lecture exams and assignments; 130 points from attendance = 570 points total)			
Lecture Unit	Lecture Topic	Chapters and Notes	Date
1. Introductory material, animal organization,	Course intro and intro to the basal phyla. There will be some discussion on origins.	Read chapter 1. Take note of figure 1.4 and know the answers to the end of chapter questions. Know end of chapter summaries too (for all chapters).	September 6 th
	The basal phyla	Chapter 9. Read history of zoology document posted in canvas modules unit one materials. There's a little information from chapter 8 but chapter 9 is the important one here	September 11 th & 13 th eMind DNA Basics due (10pts extra credit) and eMind Evolution and Classification due (20 pts) by September 18 th
		TH Exam 1 (100 pts)	September 18th-25th
2. Protostomia 1: Selected Spiralian phyla (from Lophotrochozoa and Gnathifera)	Platyhelminthes and Selected Smaller Phyla	Chapter 10	September 18 th and 20 th
	Molluscs, Annelids and Selected Lesser-Known Phyla	Chapters 11 & 12	September 25 th and 27 th
		TH Exam 2 (100 pts)	October 2nd- 9th
3. Protostomia 2: Ecdysozoa	Cycloneuralia	Chapter 13	October 2 nd and 4 th
	Panarthropoda	Chapter 14	October 9 th , 11 th , 16 th eMind Invertebrates due Oct 18 th (10 pts)
		TH Exam 3 (100 points)	October 23rd-30th
4. Deuterostomia 	Ambulacraria and intro to the chordates	Chapters 16 & 17	October 18 th and 23 rd
	Fishes	Chapter 18	October 25 th and 30 th
	Amphibians & reptiles	Chapter 19 & 20	November 1 st and 6 th
	Birds & mammals	Chapter 21 & 22	November 8 th and 13 th eMind Vertebrates due (10 pts)
5.	Ecology and Conservation	Chapter 6	November 15 th and 20 th (eMind Ecology due 10 points)
	Catch up or review days (4 th is only if needed).		November 26 th , 28 th and Dec 4 th Rise of Animals quizzes due Dec 11 th (20 pts extra credit)
		Exam 4—12:00pm (in person, 100 pts)	December 11th @ 12pm

You'll notice that I have lab days scheduled for lecture too. I will take a small part of the lab to cover lecture materials if need be.

Tentative Lab Schedule				
Lab Week	Content	Field Identification	Date	Total Points
1	Initial lab meeting and field identification	Start from the marine invertebrates in column six and work backward. Mollusc shell parts to garden spider.	September 6 th	10
2	Porifera and Cnidaria	Ticks and chiggers through question mark.	September 13 th	20
3	Platyhelminthes	Diving beetle through flat-backed millipede	September 20 th	20
4	Mollusca	Fishing spider to bats	September 27 th	20
5	Annelida	Striped skunk to redbreast sunfish	October 4 th	20
6	Ecdysozoa	Pumpkinseed to Atlantic silversides	October 11 th	30
7	Pond Life lab and Basal Phyla and Protostome Lab Quiz (In person)	Atlantic needlefish to laughing gull	October 18th	75
8	Echinodermata	Herring gull to American robin	October 25 th	30
9	Chordata: Fishes	Parts of a bird through snapping turtle	November 1 st	30 (eMind fish and frog due Nov 8th)
10	Rainforest Conservation	Black rat snake through American toad	November 8 th	10
11	Deuterostome lab quiz (in person)		November 15th	40
12	Field identification quiz (In person)		November 29th	50 (+ 20 of extra credit)
(355 total points possible; + 50 extra credit points for SERC field trip)				

