

INTRODUCTORY BIOLOGY 1 (BIOLOGY 101): COURSE SYLLABUS 007A

Instructor: Dr. Tupper

Office: [Bisdorf Room 352](#)

Phone & email: 703-845-6508; ttupper@nvcc.edu

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

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

See [website](#) for office hours.

It's best to make an appointment.



Course description: Focuses on foundations in cellular structure, metabolism, and genetics in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes process of science, interdisciplinary approaches, and relevance of biology to society. Part I of a two-course sequence. Lecture: 3 hours. Recitation and laboratory: 3 hours. Total: 6 hours per week.

General course purpose: This course provides students with an opportunity to acquire fundamental knowledge of the principles and living systems and their applications to everyday life. The course is designed for both science and non-science majors. It may serve as a prerequisite for advanced biology courses, a laboratory science graduation requirement, or as transfer credit for a four-year institution.

Course prerequisites/corequisites: Competency in Math Essentials Units MTT 1-3 as demonstrated through placement and diagnostic tests, or by completion through unit 3 in an MTT course. Competency in Math Essentials Units MTT 1-5 or equivalent is desirable. A student who provides official evidence of a minimum mathematics score of 520 on the SAT or a minimum score of 22 on the ACT taken within the last two years.

Textbooks: Really any of the major general biology textbooks will be fine. I know we've recently made a transition to *Biology in Focus*, so if you have one of the previous texts that we've used that will work. Just look up the course material in the book. Officially, we are using *the Campbell Biology in Focus 3rd edition* as the reference textbook for lecture. For lab, you will need the *General Biology 1 (bio 101) lab manual* by Izanne Zorin and Corinna Rupert. This can be purchased at the NVCC Alexandria Campus bookstore. [Click here for lab website and lab syllabus.](#)

Evaluation: The lecture component of this course (totaling 70% of your final grade) will be based on 4 in-class exams. Exams consist of multiple choice or essay questions, or a combination of both. You'll know roughly what the questions are well before the exam. Scantrons and pencils are required for in-class exams. Lecture attendance is mandatory and is graded (5 points per lecture if you arrive on time). Your lecture grade = points received/points possible x 100. Your lab grade = points received/points possible x 100. Your overall course grade = (0.7 x Lecture %) + (0.3 x Lab %). There are no make-up exams. Be on time to class. I will lock the door when the exam begins. Do not knock if you are late. I do not go over exams during lecture; please make an appointment to see me during office hours and I will go over exams with you.

Students with special needs: Students with physical disabilities who may require accommodations are encouraged to contact the college center for students with disabilities. Students with learning disabilities should contact [disability services](#). I cannot make accommodations unless I'm presented with the appropriate accommodations form.

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 policies 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 receive a failing grade and will be expelled from this course. If a student behaves in a hostile or disruptive manner, or presents any indication that he/she is a harm to themselves or others, a formal request for assistance to [NOVACARES](#) will be submitted, and the police may be contacted.

Cancellation dates: In the event of class/lab cancellation, we will resume where we left off during the next meeting. For example, if we were to have an exam scheduled on September 1, and it snowed, the exam would take place on our next scheduled meeting on September 7th.

Important dates, audit policy and incompletes (extensions): 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). Incompletes will only be granted if students have completed all lab assignments, 3 lecture exams, and all labs. 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.

How to submit assignments: To submit assignments in blackboard, scroll to the bottom of the page and click on the, "view/complete assignments" tab that corresponds with the assignment that you want to submit. Attach the appropriate file and click "submit". If for some reason your blackboard interface is different than mine, please contact me and we will figure out the problem together.

Comments on submitting work: Your work must (1) be free of common spelling errors and typos, and (2) contain one font only; please be consistent. If you cut and paste, clean it up before submitting. Use Times New Roman or similar font. Use only one color— black. When submitting work please label it as the following (as an attachment, use caps lock): LAST NAME_ASSIGNMENT_DATE. All written assignments must be proofed by the writing center staff before submission. They will provide you with verification that you were there. For assistance with writing contact staff at academic center for reading and writing:

1. Bisdorf room AA 229; 703-845-6363
2. writinghelp@nvcc.edu
3. [Writing Center Website](#)

Emails and discussion board: 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's fine to call me by my first name after the semester has ended. I will reply to your emails within 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. That said, I may not reply to your emails unless you ask me a specific question. You don't have to email me if you are going to be late to class, or if you are going to miss a class, or if you have missed class. Please do not email me asking for any logistics/instructions that I have explained in a previous class that you did not attend. For those types of questions, please use the discussion board, or ask your classmates. Additionally, please do not email me asking for extensions or to make up labs on your own time. However, please 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. Also, please 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 missed exam or prolonged absence from class). Smaller and less serious questions can be answered by emailing a classmate, or by using the discussion board.

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 etc). Also 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 to know a little about you. Also include your name, and what you preferred to be called. Post this on the discussion board and to the gradebook during the first week of the class. It's worth points.

Doing well in this course requires a substantial commitment. This course covers evolutionary biology, DNA structure and function, cell biology and genetics. By nature, these topics are challenging. You need to set aside quite a bit of time for reviewing lecture notes, reading, and studying after and before every lecture. The lab material is also difficult and time consuming. You will likely need another couple of hours a week to learn the lab material as well. I expect citations in your papers (should they be assigned) to follow CSE ([Council of Scientific Editors](#)) citation guidelines. If citations do not follow these guidelines, then points will be deducted. There are no exceptions. A few last comments: please make use of the discussion board and become friendly with other students in the class. It helps calm anxieties about the course if you

have some peer support. Be on time to class. I will lock the door 10 minutes after the start of lecture (and lab) and will not open the door until we break (or if I see you). Give yourself plenty of time to get to class. We all live in the DC metro area and understand that there is always traffic. Please do not knock while I am lecturing. If you are going to be more than 10 minutes late for lab, you will not be allowed to attend that lab session. Bring goggles with you to every lab and wear close-toed shoes. Recording devices are not allowed for note-taking purposes without my permission. I'd prefer that you take notes via pen and paper. For most people, seeing information, hearing information, and physically writing information is superior to computer use when it comes to getting the information into your short-term memory. So, get a notebook, and be prepared to write.

Tentative Lecture Schedule: Please note that the 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 one week before each exam. Please note that the final exam meeting time is different from your normal class session. This schedule is posted on my website and is hyperlinked below.

Unit 1 Topics

- Introduction to Biology, Science and the Scientific Method—weeks of 8/20 & 8/27
- Characteristics and Organization of Life—weeks of 8/27 & 9/3
- Life's Origins and Evolutionary Highlights—weeks of 9/3 & 9/10
- **Exam 1—9/12**

Unit 2 Topics

- History and Evidence of Evolution—weeks of 9/17 & 9/25
- Evolution and Gene Frequencies—weeks of 9/25 & 10/1
- Speciation—weeks of 10/1 & 10/8
- **Exam 2—10/10**

Unit 3 Topics

- Cell Structure and Function (includes transport, diffusion/osmosis)—weeks of 10/15 & 10/22
- Cellular Respiration—weeks of 10/22 & 10/29
- Photosynthesis 10/29
- **Exam 3—10/31**

Unit 4 Topics

- Somatic Cell Division and Gamete Formation— weeks of 11/5 & 11/12
- Patterns of Inheritance—weeks of 11/12 & 11/19
- DNA Structure and Function—weeks of 11/26 & 12/3
- **Exam 4 (click the link)**

