

## INTRODUCTORY BIOLOGY 2 (BIOLOGY 102): LECTURE (004N) AND LAB (0A4N) SYLLABUS

Instructor: Dr. Tupper

Office and Office Hours: [CS 120](#). Tues: 12:30-2pm. Thurs: 12:30-2pm (or by appointment)

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Lecture: MoWe 12:45PM - 2:05PM (CS104) Lab: Mo 2:20PM - 5:15PM (CS128)



**Course description:** This course provides students with an opportunity to acquire fundamental knowledge of the principles of living systems and their applications to everyday life. The course is designed for both science and non-science majors. The course may serve as a prerequisite for advanced biology courses, a laboratory science graduation requirement, or as transfer credit for a four-year institution. This course focuses on anatomy and physiology of humans and other animals and covers some ecological topics and basic plant biology.

**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:** BIO 101 is a prerequisite for BIO 102. The student should be able to read and express him/herself both orally and in writing on a college freshman level as measured by a college English competency examination (ENG III or permission of instructor).

**Textbooks:** Please note that all exam content comes from my lectures. The textbook is a fantastic peer-reviewed reference. It's called *Biology: Concepts and Investigations, 5<sup>th</sup> edition*. It's written by Marielle Hoefnaegels. ISBN10: 1260259048 | ISBN13: 9781260259049. The lab manual is called the *General Biology II laboratory Manual* by Izanne Zorin. Both books are in the bookstore. Please come to class and hear about how I structure the course before making any purchases.

**Evaluation:** The lecture component of this course will be based on 5 in-class exams, eMind and reproduction assignments, and attendance. Exams consist of multiple choice, true/false, and short answer questions. Your lecture grade = points received/points possible x 100. Your lab grade = points received/points possible x 100. Your overall course grade = (0.75 x Lecture %) + (0.25 x Lab %). There are no make-up lecture exams, the final exam is not cumulative, and you may drop one exam from exams 1-4. Exams are taken on campus with canvas on a laptop in class. You will need to download [respondus lockdown](#) browser before you take exams. If you need a laptop, [nova may provide one to you](#). Please note that I do not use canvas to calculate your final grades. **Do not rely on canvas to assess your grade.** If you have concerns about your grade, see me.

**Student needs:** Students who may require accommodations are encouraged to contact the [college center for accommodations and accessibility services](#). If you have an 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](mailto: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](#). NOVA takes your wellbeing seriously. Click on this [link](#) for various resources concerning safety.

**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/RSV/etcetera.: if you are feeling sick, please do not come to class. If I get sick and am out for an extended period, that will be problematic for all of us.

**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 1<sup>st</sup>, and there was a nationwide internet blackout, the exam would take place on our next scheduled meeting on September 7<sup>th</sup>. Since the college is not requiring covid vaccines for students, there is a chance we would have to transition to remote learning—at least temporarily. It would be best if you were ready to transition to that format beforehand. I will proctor all remote exams, so 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. Much of the lab work, however, is written. You can ask the [writing center staff](#) for help with written lab assignments 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 fine 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. That said, I may not reply to your emails 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.
4. You don't have to email me if you are going to miss a class, or if you have missed 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 extra credit.
8. Please only use your official vccs email account

**General comments on success in this course, and miscellaneous rules:** Doing well in this course requires a substantial commitment. This course covers anatomy, physiology, ecology and plant biology. By nature, these topics are challenging. You need to set aside time for reviewing lecture notes, reading, and studying after and before every lecture (probably an additional 9 hours per week). Please make use of canvas discussions and become friendly with other students in the class. Peer support is very helpful. Please be on time for class. Lectures are not recorded. Recording devices will only be permitted for students with an MOA. Please note that I like interactive courses. I usually 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 I create 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.

Unit One: Communication: An Overview of the Nervous System and Notes on the Endocrine System

- (Ch 26) Intro material, and the neuron and action potential—1/17, 1/22
- (Ch 26 & 27) Anatomy of the nervous system and sensory perception—1/22, 1/24
- **Exam 1—1/29**

Unit 2: Movement, Support, Internal Transport and Defense

- (Ch 29) Musculoskeletal system and connections—1/31, 2/5, 2/7
- (Ch 30, 31, 34) Circulatory and respiratory systems, and immunity—2/12, 2/14
- **Exam 2—2/19**

Unit 3: Intake, Processing, and Elimination

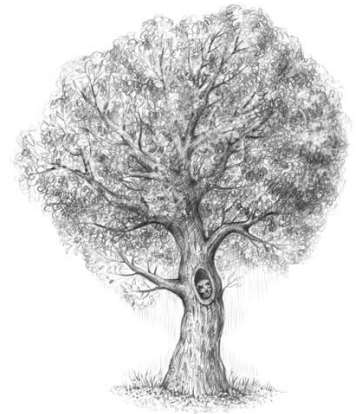
- (Ch 33) Excretion and Osmoregulation—2/21, 2/26
- (Ch 32) Digestion and Nutrition—2/28, 3/4, 3/6
- **Exam 3—3/18**

Unit 4: Reproduction

- (Ch 35) Reproductive anatomy and hormonal cycles—3/20, 3/25
- (Ch 35) Pregnancy, birth and some development—3/27
- **Exam 4—4/1**

Unit 5: Plant Biology, Ecology, and Environmental Problems

- (Ch 19, 22-24) Plant evolution, diversity, transport systems and reproduction—4/3, 4/8, 4/10
- (Ch 37-40) Populations, communities, ecosystems, and ecological succession—4/15, 4/17
- (Ch 37-40) Habitats, niche, resource partitioning, Barry Commoner's laws of ecology and ecological problems—4/22, 4/24
- [Exam 5—May 1<sup>st</sup> at 12pm.](#)



**Lecture Assignments and Due Dates:** Make sure you screen capture your quiz score as soon as the quiz is completed. Do not navigate away from the page. Do not crop the picture. Submit that as a jpg. I want to see your full screen with the quiz score. Do not forget to submit the worksheet as well. If you are missing the completed (and 100% correct) worksheet and/or your quiz score (also at 100% correct), you will receive a 0. You have 10 attempts to get a 100%.

- eMind Biomolecules—3/6 by 11:59 pm (10 points)
- eMind DNA Basics—3/6 by 11:59 pm (10 points)
- Reproduction Assignment 3/27 by 11:59 pm (not eMind; 20 points)
- eMind Plants—4/3 by 11:59 pm (10 points)
- eMind Ecology 4/10 by 11:59 pm (10 points)

**To Enroll in eMind:**

- Go to: <https://www.emindweb.com/enroll.php>
- Class Name: Bio 102 004N
- Site ID: 2001
- Reference Code: 5548421957519

Bio 102- Spring 2024 Lab Schedule				
Week #	From	To	Labs	BIO 102 Topic
Week 1	16-Jan	21-Jan		No Lab
Week 2	22-Jan	28-Jan		Introduction to Lab Safety. <b>Mandatory; cannot proceed without attending.</b> (5 points)
Week 3	29-Jan	4-Feb	1	Sensations, Reflexes, and Reactions (10 points)
Week 4	5-Feb	11-Feb	2	Muscular and Skeletal Systems (10 points)
Week 5	12-Feb	18-Feb	3	Gas Exchange Systems (10 points)
Week 6	19-Feb	25-Feb	4	Cardiovascular System (10 points)
Week7	26-Feb	3-Mar	5	Digestive System (10 points)
Week 8	4-Mar	10-Mar	6	eMind Invertebrates (laptop required; 10 points)
Week 9	11-Mar	17-Mar		<u>Spring Break</u>
Week 10	18-Mar	24-Mar	7	eMind Fish or Frog (laptop required; 10 points)
Week 11	25-Mar	31-Mar	8	eMind Pig or Cat (laptop required; 10 points)
Week 12	1-Apr	7-Apr	9	Plant Tissues and Transport (10 points)
Week 13	8-Apr	14-Apr	10	<a href="#">Rainforest</a> Lab (10 points)
Week 14	15-Apr	21-Apr	11	Field Observations (10 points)
Week 15	22-Apr	28-Apr		Lab quiz (25 points)

#### Breakdown of Points in the Course\*

Assignment	#	Point Value	Total Points Possible
Lecture Attendance	24	10	240
Lecture Exams (one of exams 1-4 dropped)	4	100	400
eMind Assignments	5	10	40
Reproduction Assignment	1	20	20
<b>Total Lecture Points</b>			<b>700</b>
Labs	11	10	110
Lab safety	1	5	5
Final Lab Quiz	1	25	25
<b>Total Lab Points</b>			<b>140</b>

\*Your lecture grade = points received/points possible x 100. Your lab grade = points received/points possible x 100. Your overall course grade = (0.75 x Lecture %) + (0.25 x Lab %)