

**UNIVERSITY OF NORTHERN BRITISH COLUMBIA**  
**BIOL 103: INTRODUCTORY BIOLOGY I**  
**Course Outline – Spring 2023**

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Student Help Meetings: Mondays, 11:30 am-12:30 pm **online** (Moodle), or by appointment\*

*\*I will not always be able to meet with students outside these times. If you are unable to meet during my scheduled student hours, or want to “meet” online at a different time, please contact me to make an appointment.*

## **I. Course Overview**

Welcome to BIOL 103, Introductory Biology I. This course is conducted entirely online, including the final exam (to be scheduled by the Registrar’s Office some time the week of June 12-16, 2023). **Note that you MUST have regular, reliable internet access**, as you will be expected to participate in the course online. You should expect to log in to the course at least once every 24 hours and possibly more frequently. BIOL 103 covers an enormous amount of material in a very short time.

In general, you will work through material from the textbook in your own time with the guidance of the notes in the five Moodle Sections. Each section concludes with an Assignment that you must complete and submit as directed for grading by the instructor. You will also have to complete Quizzes and participate actively in Forums within Moodle to earn marks.

If you have not done so already, read the Student Guide (top of the page once you have signed into Moodle, or <https://pressbooks.bccampus.ca/unbcstudents/>) to orient yourself to Moodle and the course, and to learn how to get help and technical support if you need it.

## **II. Course Description:**

Web-based material will focus on the molecular and cellular aspects of life, providing a basis for exploration of physiology and ecology of organisms in BIOL 104 and other Biology courses. This course will investigate the molecular building blocks of life, cellular structure, metabolism, photosynthesis, the genetics of inherited traits, and evolutionary processes.

### III. Need some help?

**Student Help Meetings:** Each week I will be holding online drop-in tutorials / student help meetings. To access these tutorial / office hours, you will use the Media Gallery in the BIOL 103 course. Make sure you take advantage of these! If you can't attend the day/time, please let me know and we can set up a day/time that works for both of us.

#### **Computer Literacy:**

For computer issues, such as a network access and software problems, please contact the Computer Help Desk (<https://www2.unbc.ca/information-technology-services/support-students>). For issues with Moodle, please review the Centre for Teaching and Learning Technology's FAQ site (<http://blogs.unbc.ca/elearning/>), the Student Guide, or contact your instructor.

**Accessibility:** Students with diverse learning styles and needs are welcome in this course. If you have a disability or health condition that may require accommodation, please feel free to approach me and/or the **UNBC Access Resource Centre (ARC)** as soon as possible. ARC staff are available by appointment to assess specific needs, provide referrals, and arrange appropriate accommodations to assist you in achieving your academic goals. ARC is located in room 5-157 on the Prince George campus. More information regarding registration can be found at <https://www2.unbc.ca/access-resource-centre>. They can also be reached by telephone at 250-960-5682 or email at [arc@unbc.ca](mailto:arc@unbc.ca).

The **Academic Success Centre** provides students with FREE access to academic support services:

- Tutoring (by appointment, asynchronous online, or drop-in)
- Personalized study skills assessments
- Peer-led course supports
- Downloadable handouts
- Access to self-assessment sites
- Customized programs and workshops

ASC services are fully available online for distance, regional, or physically distanced students. We utilize a variety of technology solutions to ensure you can connect to us! For more information or to book an appointment, see the Academic Success Centre website at <https://www2.unbc.ca/academic-success-centre>, visit them in the Learning Commons on the first floor of the Library on the Prince George campus, or phone 250-960-6367.

#### IV. Textbook and Course Resources:

1. Russell et al. 2022. **Biology: Exploring the Diversity of Life. 5<sup>th</sup> Canadian Edition. Nelson Education Publishing.** The text is available as **either** a physical book **or** as an e-text.

- A note about **MindTap**, an integrated learning system that also gives you access to the e-text. MindTap assignments will **NOT** form part of your grade this spring. You may still wish to use its resources to help you succeed in the course, and I will provide you with an access code at the beginning of the course. Through MindTap, you can access a TON of resources to help you understand the material for this course, including online readings for each chapter, overviews of each chapter, narrated video animations, flashcards for studying, and self-quizzes for testing yourself on different parts of the course.
- The most cost effective option is simply to buy online, annual access (and you can then use the same access for BIOL 104/124). It is ~\$100 for the year, and covers both courses. Access cards are available for purchase in the UNBC Bookstore that will provide you with an online activation code. As the e-text is part of MindTap, you only need to purchase this card for full access to the site AND textbook.
- You can also get MindTap access bundled with a hardcopy of the text if you prefer. For this, though, you **MUST** buy the bundle package from the bookstore (if you buy the textbook on Amazon it won't have access into MindTap and so you will end up having to pay again!). The bundled hardcopy and online access costs nearly twice as much as subscribing to MindTap only, and the main difference is getting a physical copy of the text rather than an e-text. We recommend just getting MindTap to save money.
- If you have access to a used copy of the 5th Cdn ed. or an older copy (4th Canadian Edition), you will have to purchase MindTap separately to access its resources. I would only recommend using the 3<sup>rd</sup> or 4<sup>th</sup> edition as a text if you are getting it for free; otherwise you are better off JUST buying the online subscription to MindTap (which includes the 5<sup>th</sup> edition as an e-text).

- **TL:DR** (too long: didn't read)... You do **NOT** need to use MindTap for this course, but you do need to have access to the textbook.

## 2. Moodle:

Moodle is the “learning management system” used at UNBC. It allows me to post material, such as lecture notes, videos, web links, and announcements, for you to view. This is also where I will post your marks for assignments and exams. Through any internet browser, simply type <https://moodle.unbc.ca/> into the URL window, and you can log in with your UNBC user name and password. Once logged in, you will see all the courses you are enrolled in. Make sure that BIOL 103 is listed, and make sure you tell me right away if it isn’t.

Once in BIOL 103, you will find all of the materials you will need for the semester, with the content and any other resources posted for your use. You can also find the Media Gallery here, which allows you to connect with the course instructor and each other.

## V. Grading and Course Marks (% of course marks)

### Grading Overview:

Assignments	5 assignments, worth 10% each	50%
Online Quizzes	18 quizzes, top 15 count	10%
Online Forum Posts	15 contributions	10%
Final Exam		30%

### 1) Assignments (50%)

- Five Assignments must be completed during the term. Each assignment will *focus* on the material covered in the relevant unit(s) of the course, but background knowledge of all course material up to the point of each assignment will be expected. You will be expected to include information from a wide variety of sources, and to think about and discuss your answers with other students and your instructor **before** submitting your assignments.
- At the end of each course section, you will find link to the relevant Assignment. Here, you obtain the file containing questions. See the Student Guide for instructions for how to use the file to submit your answers. **A practice assignment (for up to one mark added to your final grade for the course) is available.** It is important to try the practice assignment to learn how to use the Assignments tool to submit your work, where to look for updates on marking status, and how to read the instructor’s comments on returned assignments.

Assignment due dates:

Practice Assignment: May 5, 2023

Assignment #1: May 8, 2023

Assignment #2: May 15, 2023

Assignment #3: May 22, 2023

Assignment # 4: May 31, 2023

Assignment # 5: June 9, 2023

Please feel free to work ahead and submit assignments early; but be aware that questions (and answers) may be discussed online after you have submitted.

**2) Quizzes (10%)**

- Each of the course sections covers multiple chapters of the text. At the end of each chapter, there is an online quiz. You can do the quiz up to three times and view results after each try, much as you might study using questions at the back of a text book. These quizzes are found at the end of each chapter in each course section.
- The best of the three tries at each quiz counts for a maximum of one (1) participation point. For example, if you answered 80% of the questions correctly, your quiz grade would automatically go up by 0.8 marks. The quiz grade is out of a maximum of 15 marks. All quizzes must be completed by 11:59 pm on June 9, 2023 in order to count towards your participation mark. You will still be able to use the quizzes after that, to help you study for the final exam.
- See the Student Guide for information about the quizzes, and for instructions on taking quizzes in the course and looking up the results of each try.

### **3) Online Forum Posts (10%)**

Your instructor will bring various discussion topics to your attention in the course notes for each section or in the Forums. **You can (and should) also contribute to discussions by starting new topics yourself.** You may post any questions, answers or comments about the course material, including discussions about assignment questions. Also, feel free to post interesting links, relevant TV shows you've seen, or books you've read. As long as the material is relevant to the course, it is welcome in the Forums. However, please be respectful and courteous when posting. Any **meaningful participation** in Forums will earn you marks (to a maximum of 15) towards this component of the course. All contributions must be submitted by **11:59 pm on June 9, 2023** in order to count towards your participation mark. You will still be able to use the Forums after that, to help you study for the final exam.

What counts as "meaningful participation"? If you are posting a link to a YouTube video, for example, your post should have more information than just the link to a video. It should elaborate on the topic of the video and why/how you found this particular video helped you to understand the course material better, or provided a different perspective, or showed a good example, or made you think about the subject's relationship to the material covered in the course, or ..., or ...

Please post technical questions about how to participate to the Forum\_topic called "Main/FAQ" or contact your instructor via e-mail.

### **4) Final Exam (30%)**

The final exam will be scheduled by the Registrar's Office for a three-hour time period. It will be administered online through the Moodle course as an open-book exam, and will be available for a 24-hour period. You will be able to start the exam at any time during that 24-hour period, and will be given three hours to complete it. ***The final exam is cumulative.*** *Students should be familiar with **ALL** course material for the exam.*

## Academic Policies

**Deadlines:** Assignments contribute to your mark and are due at the time and date set. 10% of the marks for an assignment will be deducted for each 24 h block of time it is late, starting at the time of the deadline (i.e. if it is 5 minutes late you will still lose 10%). Assignments will not be accepted if they are more than three days late (including Saturdays and Sundays); the student(s) will receive a grade of 0 for that assignment. **Please notify me ASAP if you are expecting difficulty submitting an assignment on time. I will not deduct marks if you let me know you are having difficulty!**

**Make-up exams:** Makeup exams and assignment extensions will **only** be considered if you contact me immediately before or after your absence. ***It is your responsibility to contact me.***

Please note that the term ends on the final day of the exam period, **NOT** on the last day of classes. Students are advised not to make arrangements to travel on a date prior to the date of the final exam (scheduled by the Registrar's Office). I **will not** be able to accommodate requests for early exams due to travel arrangements, etc.!!

**Grades:** I am available to provide assistance with course material, including reviewing exam/assignment questions with you. Concerns about grades, however, must be brought to my attention as soon as possible after the grade is released to the class. If you request re-evaluation, please be aware that it could result in your grade going up or down, or remaining the same.

**Academic Dishonesty:** Any form of academic dishonesty (including, but not limited to, plagiarism, cheating on exams, misrepresentation of involvement on projects, *etc.* ***In this class, it would also include logging into someone else's online account and completing their assignments/exams for them***) ***is extremely serious, and students involved in such activities can receive an automatic F in the course.*** You should also familiarize yourselves with definitions of any of the Academic Offences, (under section: Undergraduate Regulations and Policies, VII. General Academic Regulations. 46. Academic Offences on the Online Calendar - <https://www.unbc.ca/policy/students-rights-and-responsibilities>). Ignorance of these policies will not be accepted as defence – it is your responsibility to know them. Students found participating in such activities will receive an automatic 0% on the particular assignment/exam/lab in question. If the instructor deems this offence to be severe enough, it can lead to sanctions that include disbaring the student from the course or the University itself. All matters of Academic Misconduct at UNBC require instructors to submit formal reports to the Dean and Office of Registrar, which will be put on your academic file.

**Copying and Pasting.** Do **NOT** do this! While it may seem a quick way to answer an assignment question, **this does constitute plagiarism** – whether the text is from an online source, another student's assignment, or even another assignment of yours! Typing out a passage from your textbook also fits in this category. Students who fail to put their answers into their own words (or new words, if copying ideas from their own work) will automatically receive 0% on the particular assignment/lab/exam in question. If the nature of the act is considered serious, recommendations for further disciplinary action will be forwarded to the Dean. Please ask the instructor for more information if you do not understand this prohibition!!

## **Topics covered in BIOL 103:**

### **Unit 1: The Fundamentals of Life (May 1-8)**

- The Origins of Life (Ch. 1)
- An Overview of the Cell (Ch. 2)

### **Unit II: Energy and Life (May 8-15)**

- Energy and Enzymes (Ch. 3)
- Cell Membranes (Ch. 4)
- Cellular Respiration (Ch. 5)
- Photosynthesis (Ch. 6)

### **Unit III: Genes (May 15-22)**

- Cell Cycles (Ch. 7)
- Genetic Recombination (Ch. 8)
- Mendelian Genetics (Ch. 9)
- Genes, Chromosomes and Human Genetics (Ch. 10)

### **Unit IV: DNA and Gene Expression (May 22-31)**

- DNA (Ch. 11)
- Genes to Proteins (Ch. 12)
- Gene Regulation in Eukaryotes (Ch. 13)

### **Unit V: Evolution and Classification (May 31-June 9)**

- Descent with Modification (Ch. 16)
- Microevolution (Ch. 17)
- Species and Macroevolution (Ch. 18)
- Classification, Evolution and Phylogeny (Ch. 19)