IB 100: Biology in Today's World

Fall 2024

Instructor Information

Course instructor:

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General Information

Course Description

Integrative Biology (IB) 100 is a 3-credit hour general education course designed to introduce you to the biology topics that are likely to be meaningful to you during your life. The course includes an in-depth focus on three contemporary issues in modern biology: the environment, traditional and molecular genetics, and evolution. You should learn the biological concepts that will help you make informed decisions in the marketplace, the voting booth, your doctor's office, or a school board meeting.

Course Information

- This is a POT B course, meaning that this course runs from October 21, 2024-December 20, 2024
- Credit Hours: 3-hours
- Prerequisites: None
- Requirements Met: Gen Ed; credit is not given for both Integrative Biology 100 and 101.

Course Goals

Upon completing this course, students will be able to:

- Distinguish scientific hypotheses and theories from pseudoscientific explanations of the biological world
- Apply the process of scientific investigation to answer questions about the biological world
- Use your knowledge base of biology as a foundation for life-long learning in the biological sciences

Course Structure

IB 100 is an online course with no face-to-face class meetings. All lessons, learning activities, and assessments will be conducted in the Canvas Learning Management System (LMS). Lessons and graded online learning activities will take advantage of a wide range of biology web resources, including text, video, animations, simulations, blogs, etc. You will participate in a once weekly synchronous online discussion on Wednesdays using Zoom (time determined by which section students chose at registration) and participate in asynchronous online discussions with your instructors and classmates. All course activities will be conducted online.

This is a 3–credit hour course. The course is 8 weeks long, including the Thanksgiving or Spring Break, and consists of 8 content modules. Be aware that this course is accelerated in nature; 16 weeks' worth of content will be addressed in an 8-week time span. You should dedicate approximately 9–12 hours per week to working on the course itself, but actual time commitments will vary, depending on your input, needs, and personal study habits. You are expected to log on to the course website at least once daily on weekdays but as discussions develop, you will probably need to do so more frequently.

This course is designed with the principles of collaborative learning, constructivism, and active participation in mind. You are encouraged to share your thoughts and engage in problem solving. The course has a consistent and predictable structure, organized around the weekly modules, within a course management system that is straightforward and easy to navigate. Instructions and due dates for activities and assignments are clearly articulated so that you know what is expected of you and will be able to easily stay on track.

Textbook
Biology Now, Fourth Edition (Core Edition without Physiology) Anne Houtman, Megan Scudellari, and Cindy Malone
W. W. Norton & Company, Inc.

The Biology Now textbook and access to the online book materials (InQuizitive) are required for IB 100 ONL, and can be purchased in multiple formats to fit your budget. To purchase the text and/or InQuizitive, you can visit the publisher's website at https://wwnorton.com/books/9781324060789

If you use the course reserve or purchase a used textbook, then note that you must purchase access to InQuizitive ($35), an adaptive quiz system provided by the textbook publisher that accounts for a portion of your weekly grade. Note that some chapter stories are only included in the newest edition, not in the previous editions.

The publisher offers free 21-day trial access to limited chapters and InQuizitives. You will be prompted to sign up for the free trial or buy access for $35 the first time you attempt to access InQuizitive through the IB 100 Canvas site. Access to InQuizitive is included with the purchase of any of the two options listed below:

1. Paperback:
Can be purchased through your campus bookstore. Every NEW copy of the Paperback text automatically comes with free access to the ebook for one year.
SBN: 978-1-324-06078-9
Price: $154.37

2. Ebook:
If you don't need a paper book, the ebook alone can be purchased via the W. W. Norton Website.
ISBN: 978-1-324-06091-8
Price: $59.95

Course Activities

Course Grading: Assignments are worth 100 points unless otherwise noted. You can access your scores by clicking the Grades link from the left column of the course home page. If you can't see this menu on the left, click the button on the top left with three horizontal lines to expand the sidebar. All module activities have due dates. All activities will not be accepted past the due date unless under special circumstances that must be communicated to the course instructor as described in the Syllabus.

Grading Scale

Grade	Percent
A+	100.00+
A	94.00–99.99
A-	90.00-

Grade Categories and Weighting Factors

Activity Categories	Weight
Lessons	20%
Reading Quizzes (InQuizitives)	25 %
Synchronous Discussion Session Attendance and Activity	10 %

	93.99
B+	87.00-89.99
B	84.00–86.99
B-	80.00–83.99
C+	77.00-79.99
C	74.00–76.99
C-	70.00–73.99
D+	67.00-69.99
D	64.00–66.99
D-	60.00–63.99
F	0.00–59.99

Assignments	25 %
Final Video Project	20 %
Total	100 %

Each module is designed with the same structure and activities unless otherwise specified. The module activities are explained in greater detail below. You can find the due dates of specific assignments on each week's overview page. All course activities have due dates and contribute to earning points towards the overall course grade. No activities will be accepted past their due dates.

Lessons: The instructor will provide lessons to clarify common misconceptions that students have in each module. Questions embedded in the video must be answered to advance through the video and to earn points. Multiple attempts at the lesson videos are allowed to encourage students to review challenging concepts, and the highest grade earned up until the due date will be recorded.

Reading Quizzes (InQuizitives): The textbook publisher has created an adaptive quiz management system, called InQuizitive, to help students test AND improve their mastery of the assigned textbook chapters each week. The questions presented to students depend both on their stated confidence (with higher confidence leading to fewer questions that are worth more points) and whether they answered the previous question correctly. If an incorrect answer is given, the student will be directed to the relevant textbook pages to review. Multiple attempts at the InQuizitives are allowed to encourage students to review challenging concepts, and the highest grade earned will be recorded. **Please be sure to click on the provided InQuizitive links so that grades are automatically transferred from InQuizitive into the Moodle grade book**; if InQuizitive is accessed directly from the publisher when a quiz is completed, then clicking on the course link later will transfer the grade previously earned.

Module 7 does not have InQuizitives but has a reading quiz. Students will review the material from the readings and earn points. Multiple attempts at the reading quiz are allowed to encourage students to review challenging concepts, and the highest grade earned will be recorded.

Synchronous Discussion Session (SDS): Each Wednesday, students will participate in a one-hour synchronous discussion session using Zoom. Students will attend the time they selected when registering for the course (Sections EN1 and EN2 meet at 12 PM and 2 PM respectively). Students receive credit for attending the SDS AND for completing an activity during the session. The SDS activity must be submitted during the session to receive credit. Students will receive one free pass for the semester, receiving full SDS credit for one missed session.

Assignments: The purpose of the assignments is to give students practice in evaluating biologically relevant web resources they may encounter in their everyday lives and to give students the opportunity to interact with their classmates. Assignments include orientation activities and all database activities.

Database Assignments: Together as a learning community, we will work to build our own information database on reputable recent news articles related to Biology. This database project is intended to be an engaging way to practice your research and critical evaluation skills while learning more about specific examples of Biology that are of interest to you. Here you will:

- Choose from a list a topic you would like to explore further
- Find a recent (under 1 year) news article on that topic
- Review the article and evaluate its credibility
- Post this information to our database
- Assess your work and the work of your peers
- Write a reflection post on your participation in the database

Students will write about their articles in Modules 1, 3, 5, and 7 and they will evaluate and reflect on their work in Modules 2, 4, 6, and 8. Thus, students will write, assess, and reflect on 4 articles in total for the course. For all details see Database Instructions and Rubric.

Final Video Project: The purpose of the final video project is for students to synthesize knowledge about biological concepts they learned in class and to practice talking about biological concepts to the public. Students will be encouraged to share their videos with friends and families. The videos will be peer graded. The final video project fulfills the new University requirement that at least 20% of the overall course grade is earned through activities with student identity verification.

Extra Credit: There are several ways to earn up to 2% overall extra credit for the course, including:

Community Participation: Community participation in an online learning environment is essential to your commitment to engagement with our course. Thus, you have an opportunity to both build self-advocation skills and earn extra credit in this course through your participation in our Q & A Forum. Ways to attain extra credit points in this Community Participation category are listed below:

5 points: Q & A Forum postings and replies. Each post is worth 1 point and each reply is worth 2 points (for a maximum of 5 points total). Ideas for posts include:
Any non-personal (i.e. Grade-related) questions related to the course
Reply to any question asked

Self-Assessments: The purpose of this self-assessment is for you to apply what you have learned and demonstrate your understanding of the biological concepts addressed in this module. Use the learner objectives listed at the beginning of each lesson video to guide your studying. Self-assessments consist of 20 multiple choice questions worth 0.25 point each for a total of 5 extra credit points. You will have only one graded attempt at the self-assessment. This is a closed book assessment that must be completed independently. Follow the guidelines from the University of Illinois Standards for Academic Integrity (https://studentcode.illinois.edu/article1/part4/1-401/).

Surveys: We very much value your feedback! One ICES worth 5 points will be available at the end of the course. Thanks in advance for helping us to continually develop this course to be better.

Getting Help

- See our Need help? (viewable from the course page)
- First, for questions about course content, activities, deadlines, technical problems, etc., please check the Syllabus, Course Frequently Asked Questions (faqs), or General Q & A forum to see if someone else has already asked your same question and received a response
- If your question isn't there yet, post your question to the General Q & A forum. Please help build our online community and help your peers out if you know the answer!
- If you have a personal question, email the instructor at ib100-online@illinois.edu
- If you have technical problems, contact Technology Services Help Desk at consult@illinois.edu or get 24/7 Instructure Live Support.

Course Policies

Accommodations: To obtain disability-related academic adjustments and/or auxiliary aids, students should contact both the instructors and the Disability Resources and Educational Services (DRES) as soon as possible (https://www.disability.illinois.edu). You can contact DRES at 1207 S. Oak Street, Champaign, (217) 333-1970, or via email at disability@illinois.edu.

Diversity, Equity, and Inclusion (DEI): In forming an inclusive course, we mean a course that values and creates space for all identities such as those based on ethnicity, culture, sexual identity, gender identity, religious identity and beyond. Research shows that inclusive courses allow for better learning outcomes, a more positive learning experience, better community, and better leadership training in engaging humanity.

To create an inclusive space in this course, we must all work to collaboratively create a safe and respected space that supports and encourages everyone to share their views and concerns. We must value multiple perspectives and experiences, while also reducing student experiences of marginalization. We must treat each other as individuals.

Students are encouraged to share any feedback on how instructors, tas, or fellow students could work to better create this inclusive space. Feedback can be given to the instructors at any time, anonymously using our Inclusivity Feedback Form on Moodle (you may need to access this form via your Illinois Google Apps account but know that the form is still anonymous).

Late Submissions of Course Activities: All course activities are due by 11:55 PM Central Time on the dates specified in the weekly overviews, unless otherwise noted. No course activities, including assignments, will be accepted after the deadline except under extenuating circumstances. In those cases, your instructor must be notified before the deadline or soon thereafter. Documentation of the extenuating circumstances must be provided for special accommodations to be granted. Each module opens early on Friday, so we encourage you to start on your weekly course activities well ahead of their due dates. Avoiding last minute work will enhance your learning experience, give you the chance to reach out to the instructors for help, and prevent the temptation to cheat.

Instructor Responses: Questions posted to the Q & A Forum will be answered within 24 hours and generally more quickly than that. If possible, students are encouraged to answer questions posted by other students to the Q & A Forum, rather than waiting for an instructor's response. Assignments submitted online will be reviewed and graded by the course instructor within 3 business days. Exams/projects will be graded within 5 business days. Please email the instructor at **ib100-online@illinois.edu**. The instructor will respond to e-mail messages and phone calls within 24 hours of receiving them unless the instructor notifies you ahead of

time of an inability to do so.

Academic Integrity: Academic dishonesty will not be tolerated. Examples of academic dishonesty include the following:

- Cheating
- Fabrication
- Facilitating infractions of academic integrity
- Plagiarism
- Bribes, favors, and threats
- Academic interference
- Examination by proxy
- Grade tampering
- Non-original works

Should an incident arise in which a student is thought to have violated academic integrity, the student will be processed under the disciplinary policy set forth in the Illinois Academic Integrity Policy (https://studentcode.illinois.edu/article1/part4/1-401/), using the FAIR system. If you do not understand relevant definitions of academic infractions, contact your instructors for an explanation within the first week of class.

Student Content Copyright: Participants in University of Illinois courses retain copyright of all assignments and posts they complete; however, all materials may be used for educational purposes within the given course. In group projects, only the portion of the work completed by a particular individual is copyrighted by that individual. The University of Illinois may request that students' materials be shared with future courses, but such sharing will only be done with the students' consent. The information that students submit during a course may, however, be used for the purposes of administrative data collection and research. No personal information is retained without the students' consent.

Non-Student Content Copyright: Everything on this site and within University of Illinois courses is copyrighted. The copyrights of all non-student work are owned by the University of Illinois Board of Trustees, except in approved cases where the original creator retains copyright of the material. Copyrights to external links are owned by or are the responsibility of those external sites. Students are free to view and print material from this site so long as

- The material is used for informational purposes only;
- The material is used for non-commercial purposes only; and
- Copies of any material include the respective copyright notice.

It is expressly forbidden to make copies of course materials without the express written permission of the University of Illinois Board of Trustees (any request for such permission must be submitted through the School of Integrative Biology), including, but not limited to, self-assessments, exams, and assignments. It is further forbidden to upload any course materials to online websites including, but not limited to, course-assistant sites (e.g. Coursehero), online shared documents (e.g. Google Docs), or other online forums (e.g. Reddit).

Student Conduct: Students are expected to behave in accordance with the penal and civil statutes of all applicable local, state, and federal governments, with the rules and regulations of the Board of Regents, and with University regulations and administrative rules. Read more about the student code, handbook,
And academic integrity policy and procedure (https://studentcode.illinois.edu/article1/part4/1-402/)

Netiquette: In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. The following are tips for interacting online via e-mail or discussion board messages, adapted from guidelines originally compiled by Chuq Von Rospach and Gene Spafford:

- Remember that the person receiving your message is someone like you, deserving and appreciating courtesy and respect.

- Be brief; succinct, thoughtful messages have the greatest effect.
- Your messages reflect on you personally; take time to make sure that you are proud of their form and content.
- Use descriptive subject headings in your e-mails.
- Think about your audience and the relevance of your messages.
- Be careful when you use humor and sarcasm; absent the voice inflections and body language that aid face-to-face communication, Internet messages are easy to misinterpret.
- When making follow-up comments, summarize the parts of the message to which you are responding.
- Avoid repeating what has already been said; needless repetition is ineffective communication.
- Cite appropriate references whenever using someone else's ideas, thoughts, or words.

Communications: Questions pertaining to the course should be posted in our Q & A Forum. You can get to this forum from the course home page. Posting questions here allows everyone to benefit from the answers. If you have a question, someone else is probably wondering the same thing. Students submitting a question via e-mail may be directed to resubmit the question to the Q & A Forum. Also, participants should not hesitate to answer questions posed by peers if they know the answers and the instructor has not yet responded. This not only expedites the process, but also encourages peer interaction and support.

If you have an emergency that will keep you from participating in the course, please notify your instructor at ib100-online@illinois.edu. Provide callback information in your e-mail (if necessary). You should also notify your program director of any emergencies.

Technology Requirements for This Course

Please review the general hardware and software. Requirements (https://online.illinois.edu/getting-started/computer-technical-requirements) established for all online courses. Additionally, this Resource Guide (https://techservices.illinois.edu/student-resource-guide/) from Technology Services is handy as well. System requirements. Canvas Learning Management System(LMS) in which your course is housed. Visit learn.illinois.edu to get started. This is where your course syllabus is kept, where readings and other content can be found, and where you submit your assignments and participate in discussions. More helpful resources are here: learn more about System Requirements (https://online.illinois.edu/docs/default-source/default-document-library/canvas-lms-information.pdf?Status=Temp&sfvrsn=63629311_5) and Instructure and Technology Services Student Resources (https://answers.uillinois.edu/illinois/112312). Zoom is a tool that allows multiple people to join simultaneously via a computer to text chat, audio chat, video chat, collaborate on a digital whiteboard, and even share your computer's desktop with one another. If you experience any issues with your Illinois Zoom account and LMS integration, email the Tech Services Help Desk at consult@illinois.edu. The weekly Synchronous Discussion Sessions and teaching assistant Office Hours make use of Zoom.

Tentative Course Schedule

* Weeks shown for Fall/Spring Semester. There are no course activities during the week of Fall Break (Week 5 during Fall Semester) or Spring Break (Week 2 during Spring Semester).
**All deadlines are at 11:55 PM Central Time except for Synchronous Discussion Sessions.

Week	Assignment	Due Date
Module 1: The Process of Science	• Module 1 Lesson: The Process of Science	Monday
	• Module 1 Textbook Readings • Module 1 InQuizitive	Tuesday
	• M1/M2 Database Topic Choice • Module 1 Synchronous Discussion Session (SDS) • Orientation Activities: Read the Syllabus; Orientation Lesson; Getting to Know Your Classmates; Academic Integrity Lesson	Wednesday
	• Orientation Activities: Orientation Lesson; Academic Integrity Lesson	Thursday
	• M1/M2 Database Entry Post	Friday
	• Extra Credit: Module 1 Self-Assessment	Sunday
Module 2: Ecological Interactions	• Module 2 Lesson: Ecological Interactions	Monday
	• Module 2 Textbook Readings • Module 2 InQuizitive	Tuesday
	• M1/M2 Database Peer Grading: evaluate 3 peers and self-assess • Module 2 Synchronous Discussion Session (SDS)	Wednesday
	• M1/M2 My Top 2 Reflection Post	Friday
	• Extra Credit: Module 2 Self-Assessment	Sunday
Module 3: Energy Flow & Matter Cycling	• Module 3 Lesson: Energy Flow & Matter Cycling	Monday
	• Module 3 Textbook Readings • Module 3 InQuizitive	Tuesday
	• M3/M4 Database Topic Choice • Module 3 Synchronous Discussion Session (SDS)	Wednesday
	• M3/M4 Database Entry Post	Friday
	• Extra Credit: Module 3 Self-Assessment	Sunday
Module 4: Cell Reproduction & Heredity	• Module 4 Lesson: Cell Reproduction & Heredity	Monday
	• Module 4 Textbook Readings • Module 4 InQuizitive	Tuesday
	• M3/M4 Database Peer Grading: evaluate 3 peers and self-assess • Module 4 Synchronous Discussion Session (SDS)	Wednesday
	• M3/M4 My Top 2 Reflection Post	Friday
	• Extra Credit: Module 4 Self-Assessment	Sunday
Module 5: Molecular Genetics	• Module 5 Lesson: Molecular Genetics	Monday
	• Module 5 Textbook Readings • Module 5 InQuizitive	Tuesday
	• M5/M6 Database Topic Choice • Module 5 Synchronous Discussion Session (SDS)	Wednesday
	• M5/M6 Database Entry Post	Friday
	• Extra Credit: Module 5 Self-Assessment	Sunday
Module 6: Evolution	• Module 6 Lesson: Ecological Interactions	Monday
	• Module 6 Textbook Readings • Module 6 InQuizitive	Tuesday
	• M5/M6 Database Peer Grading: evaluate 3 peers and self-assess • Module 6 Synchronous Discussion Session (SDS)	Wednesday

	• Final Video Project Proposal (See Final Video Project tab)	Thursday
	• M5/M6 My Top 2 Reflection Post	Friday
	• Extra Credit: Module 6 Self-Assessment	Sunday
Module 7: Biotechnology	• Module 7 Lesson: Biotechnology	Monday
	• Module 7 Textbook Readings • Module 7 InQuizitive	Tuesday
	• M7/M8 Database Topic Choice • Module 7 Synchronous Discussion Session (SDS)	Wednesday
	• M7/M8 Database Entry Post	Friday
	• Extra Credit: Module 7 Self-Assessment	Sunday
Module 8: Wrapping Up	• Final Video Project Submission	Monday
	• M7/M8 Database Peer Grading: evaluate 3 peers and self-assess	Wednesday
	• M7/M8 My Top 2 Reflection Post • Peer Assessment of Final Video Project Submission	Friday