

Biology 102 Paced Modern Biology 1-B: Spring 2021

You must check Blackboard, Mastering Biology and your John Jay E-mail account regularly.

You are responsible for any and all course information, assignments, announcements, and communication that occurs through blackboard, the textbook website and/or your email account.

Class Sections:

Lecture:	BIO 102_01	online/asynchronous	Dr. Joyce Lau
Lab:	BIO 102_01L1	online/asynchronous	Dr. Adam Stefanile

Instructor Contact Information:

Note: If you need an appointment with an instructor, please email them using the addresses provided. Virtual zoom meetings can be scheduled on an individual basis.

Lecture Instructors:

Dr. Joyce Lau: ylau@jjay.cuny.edu

Lab Instructors:

Dr. Adam Stefanile: astefanile@jjay.cuny.edu

General Course Information

Course description:

Paced Modern Biology I-B is the second semester alternative to Modern Biology I. Bio 102 is an in-depth exploration of the basic properties of living systems on the molecular, cellular, and organismic levels. Topics in Biology 1-B include cell division, mitosis and meiosis, genetics as well as gene structure, function, and regulation. Representative organisms from the prokaryotic and eukaryotic kingdoms are studied in detail. The laboratory portion of the course is designed to reinforce the concepts taught in the lecture and to teach basic laboratory skills. In the laboratory students will learn basic laboratory skills and experimental techniques, including measurement, identification of macromolecules, genetic crosses, and forensic DNA analysis. Biology 102 consists of lectures and laboratory experiments covering topics in modern biology. The lecture portion will have chapter quizzes and unit exams, and ALL will count. In addition, there will be discussion board forums and a participation component, altogether comprising 70% of the course grade. The laboratory portion is worth 30% of the final grade for BIO102.

Learning Goals of Bio 102:

- Knowledge
 - Outline some of the basic concepts of biology
 - Explain the following basic concepts in the field of modern biology: genetics, and gene regulation
 - Understand the importance of ethics in biology with respect to scientific advancements, experimental design, interpretation of results and the impacts of humans on the environment
- Reasoning
 - Use knowledge of genetics to solve problems regarding inheritance
 - Explore ethical issues within the context of historical and current scientific methodologies
- Practical skills
 - Illustrate the following laboratory skills and experimental techniques: principles of scientific measurement, identification of macromolecules, genetic crosses, and forensic DNA analysis.
 - Establish proper positive and negative controls for basic biochemical experiments and understand the ethical implications of proper experimental design
- Communication
 - Apply communication and analytical skills by writing a laboratory report and completing an oral presentation.
 - Participate in discussions about scientific concepts, ethics and issues

Required Texts:

1. Lecture and Recitation (**Mastering Biology is required for this course**)

Title: Campbell Biology, Published by Pearson, 12ⁿ ed.

Purchasing Options:

1. Mastering Biology with eText 18 Week Access: ISBN 9780136780809
2. Mastering Biology with eText 24 Month Access: ISBN 9780135855836
NOTE: The following "COMBO" options include Mastering Biology, the eText and a loose-leaf copy of the textbook that will be mailed to you
3. Mastering Biology Combo card: 18 Week Access: ISBN 9780136858256
4. Mastering Biology Combo card: 24 Month Access: ISBN 9780136858263

Important Information:

- *A link to purchase is available on Blackboard This will link you directly to the course and is the suggested way to purchase.*
- *Used copies/rented texts (i.e., on Amazon, Alibris, etc.) may not provide valid access to the Mastering Biology Learning Platform*
- *If you are continuing on to Bio 104, it is suggested that you purchase the 24 Month option, this will still be valid for 104 (provided you take the course within the 24-month period)*

Statement of the College Policy on Plagiarism:

- Plagiarism is the presentation of someone else's ideas, words, or artistic, scientific, or technical work as one's own creation.
- Plagiarism is the copying a peer's work OR copying your own work from a previous course
- You CANNOT cut and paste words and sentences from websites, articles, etc. You must put concepts in your own words, and you must cite the source properly.
- You CANNOT cut and paste lecture or course content (from slides or from the text). This is considered to be a form of plagiarism.
- You CANNOT plug-in questions into a search engine and paste the results into your submission. Though we encourage you to explore topics and consult external resources, the material must relate to your course and the specific question asked. You need to be able to integrate outside information into your own answer, if applicable.
- Using the ideas or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source.

- Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism.
- It is the student's responsibility to recognize the difference between statements that are common knowledge (which do not require documentations) and restatements of the ideas of others. Paraphrase, summary, and direct quotation are acceptable forms of restatement, as long as the source is cited.
- Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has free guides designed to help students with problems of documentation. (JJC Undergraduate Bulletin, see Chapter IV Academic Standards)
- This course will use turnitin.com or SafeAssign for all written assignments. Plagiarism will result in an automatic "zero" for the assignment. Depending on the severity of the offense, the instructor reserves the right to report the academic dishonesty to the college disciplinary mechanisms and/or the Academic Integrity Office.

Plagiarism is taken seriously in this course and will result in an automatic zero on the work in question and further academic penalty depending on the severity of the case. Plagiarism of course materials is also prohibited and will result in a zero grade for the work in question.

Distribution of any lecture/recitation/lab material is strictly prohibited and will result in further academic penalty.

Accommodations for Students with Disabilities: (<https://www.jjay.cuny.edu/accessibility>)

Qualified students with disabilities will be provided reasonable academic accommodations if determined eligible by the Office of Accessibility Services (OAS). Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility from the OAS, which is located at L66 in the new building (**Phone: 212-237-8031; email: accessibilityservices@jjay.cuny.edu**). It is the student's responsibility to initiate contact with the office and to follow the established procedures for having the accommodation notice sent to the instructor. Please note that this needs to be done within the first few weeks of the semester, not once the semester has been completed.

Math and Science Resource Center (NB L01.94):

Tutoring is available free of charge for this course in the Mathematics & Science Resource Center (MSRC). The website can be found here: <https://www.jjay.cuny.edu/mathematicsscience-resource-center>. The MSRC will also be holding many workshop sessions throughout the semester. Students are strongly encouraged to attend these sessions. A workshop schedule is presented at the end of this syllabus. Contact Information for the MSRC, room 01.94 NB: Phone: (646) 557-4635; Email: msrc@jjay.cuny.edu TutorTrac (for scheduling appointments): <https://jjctutortrac.jjay.cuny.edu>

Blackboard:

Important course announcements, lecture notes, suggested homework assignments, review questions, a discussion forum for Q and A, and other resources will be posted to the course on Blackboard.

Students are responsible for checking their **John Jay e-mail account** regularly.
Contact DoIT, not your Bio instructor, for help with e-mail or Blackboard.

Technology Requirements:

Students are expected to check on the blackboard site for important information regarding technical specifications to ensure that they are equipped properly for online learning. If you need assistance, please refer to the "Blackboard Info" site on the course site for specific requirements. If you need access to equipment, please click on this link: <https://www.jjay.cuny.edu/student-resources> under "Technology Issues" for information

regarding the laptop loan program. Be aware that the CUNY eMail may have free software (i.e. 365, antivirus, etc.) that you have access to as a student.

Mastering Biology and eText:

In addition to the information posted on Blackboard, there will be quizzes, tests and supplemental course material that will only be available through the Mastering Biology Learning Platform. **As a result, access to Mastering Biology is required for the course.** Students are responsible for completing material prior to the due dates and regularly checking the site for any postings or additional material. If there is a technical issue regarding a deadline or quiz material, it is the student's responsibility to notify the instructor **prior** to the deadline.

Contact the Pearson Product Support Team on the textbook site, not your Bio instructor, for help the textbook

Important Policies

Online Participation:

It is very important to stay up to date with the course material, to login to the course site daily and to ensure that all coursework is submitted on time. Failure to do so will result in missed grades, incomplete work and will result in a poor grade. If there is an event that will disrupt your participation in the course, it is your responsibility to notify the instructor as soon as possible.

Grading Scheme:

<u>Lecture</u>	<u>70%</u>
Unit Tests (35%)*	
Chapter Quizzes (20%)*	
Discussion Board (10%)	
Review Session Participation (5%)	
<u>Laboratory (exams, homework, activities, etc.)</u>	<u>30%</u>
TOTAL	100%

**Adaptive follow-ups may contribute as extra credit in the form of several % points toward your final grade*

Grading Scale:

The grade for the Bio 102 course is based on lecture (70%), laboratory (30%). The grading scale here (→) is the official grading scale for this course. There will be no exceptions to this scale and grades will not be rounded, except as explained here. Following all computations, the grade will be rounded to the nearest tenth of a point in Microsoft Excel (one decimal place, e.g., 97.2%). This means that a 72.9499% is a “C-“and a 72.9500% is a “C.

93.0 and above	A
90.0 - 92.9	A-
87.0 - 89.9	B+
83.0 - 86.9	B
80.0 - 82.9	B-
77.0 - 79.9	C+
73.0 - 76.9	C
70.0 - 72.9	C-
67.0 - 69.9	D+
63.0 - 66.9	D
60.0 - 62.9	D-
below 60.0	F

Lecture Unit Tests and Quizzes/Homework:

There are four “end of unit” tests that will be due at the end of each “unit”. All tests are of equal weight (9%) and all will count. There will also be “quizzes” or “homework” at the end of each chapter that will comprise 20% of your lecture grade. These can be found on the Mastering Biology on the **Lecture Blackboard site**. If you have technical issues or if you miss a test, quiz or homework assignment (or foresee that you will miss one) for any reason, ***it is your responsibility to notify the instructor as soon as possible***. Adaptive follow-ups will be assigned after each quiz/test. Adaptive follow-ups may contribute as extra credit in the form of 1-2% points toward your final grade. It is strongly encouraged to complete these as they may put you into the next grade range if you are borderline at the end of the semester.

Discussion Board Participation:

The discussion board comprises 10% of the Bio102 course grade and is based on bi-weekly discussions (posted in the discussion area on Blackboard. It is expected that students participate actively, often and in a courteous manner. Each student is expected to create a main post (due Friday) and reply to two other posts (by the following Friday). These discussion boards are an important way to assess your knowledge and to gain important communication skills. Plagiarism from websites or from each other is not acceptable and will result in a zero grade and further academic penalty, if warranted.

Live Reviews Sessions:

Live review sessions/office hours will be held each week and participation in these are mandatory. Students are expected to have the weekly readings done and the weekly slides (lecture and recitation) reviewed PRIOR to attending the session. This is to ensure that you have reviewed the material and have the necessary background to participate in the review sessions. If you have questions or are confused about a concept, the instructor will be taking live questions and answering them. These sessions will be recorded and posted on blackboard for review purposes. **Participation in these sessions is an important component of this course.** You must attend the session or view the recording using the link/post provided in order for it to count towards your participation grade. Track statistics will be activated on the post to ensure that the session is viewed, and this action is accounted for. These sessions must be viewed by Sunday at midnight for each week in order to receive the credit. PLEASE CHECK WITH YOUR INSTRUCTORS FOR THE DATE AND TIME FOR REVIEW SESSIONS.

COLLEGE STATEMENT FOR RECORDED SESSIONS: Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the “chat” feature, which allows students to type questions and comments live.

Class Protocol:

CUNY John Jay College expects students to maintain standards of personal integrity that are in harmony with the educational goals of the institution; to observe national, state, and local laws and University regulations; and to respect the rights, privileges, and property of other people. ANYONE disrupting the class will be removed. Please refer to the “Netiquette” section on the “Blackboard Info” Link for more information.

Note on protocol to address the professor by email:

- *It is inappropriate to send aggressive or rude emails to the professor or any instructor. Reception of any such email from a student by the professor will result in points taken out of your final grade and reporting to the department. Emails to the professor should have the subject of your email and course name (Bio102) in the subject line. Emails should also be properly addressed (i.e. Dr. Smith, not "Hey Prof"). Any emails not properly addressed will go unanswered.*
- *It is important to construct an email properly. This means you should include important information, such as your name, EMPLid, course section, etc.*
- *It is important to realize that there is not an immediate response time. Please give your instructor time to be able to respond to your email. Keep in mind they have other courses and other responsibilities.*

BIO 102 Lecture Schedule

Week Dates	Topics	
1 Jan 29-31	Introduction to the Course <i>Discussion Board Introduction Due Jan 31</i>	n/a
2 Feb 1-7	Cell Division and Cell Cycle Control	ch.12
3 Feb 8-14	Inheritance and Meiosis <i>Discussion Board Topic 1 Due Feb 12</i>	ch.13
4 Feb 15-21	Inheritance and Meiosis	ch.13
<hr/> EXAM 1: Chapters 12 and 13– Opens Feb 21 6pm Close Feb 22 11:59pm <hr/>		
5 Feb 22-28	Mendelian Genetics <i>Discussion Board 2 Due Feb 26</i>	ch.14
6 Mar 1-7	Mendelian Genetics	ch.14
7 Mar 8-14	Complex Genetics and Linked Genes <i>Discussion Board 3 Due Mar 12</i>	ch. 15
8 Mar 15-21	Complex Genetics and Linked Genes	ch. 15
<hr/> EXAM 2: Chapters 14 and 15– Opens Mar 21 6pm Close Mar 22 11:59pm <hr/>		
9 Mar 22-26	DNA and DNA replication	ch.16
10 MAR 29-APR 4	SPRING RECESS	
11 Apr 5-11	Transcription and Translation <i>Discussion Board Topic 4 Due Apr 9</i>	ch.17
12 Apr 12-18	Transcription and Translation	ch.17
<hr/> EXAM 3: Chapters 16 and 17 – Opens April 18 6pm Close April 19 11:59pm <hr/>		
13 Apr 19-25	Prokaryotic and Eukaryotic Gene Regulation <i>Discussion Board Topic 5 Due Apr 23</i>	ch.18
14 Apr 26-May 2	Prokaryotic and Eukaryotic Gene Regulation	ch.18
15 May 3-9	Viruses, Bacteria and Pathogens <i>Discussion Board Topic 6 Due May 7</i>	ch.19
16 May 10-16	Viruses, Bacteria and Pathogens	ch.19
<hr/> 17 EXAM 4: Chapters 18 and 19 – EXAM WEEK MAY 18-25 (MAY 20th FOR CLASS) <hr/>		

Students that cannot complete a test must inform their instructor immediately in order arrange for any accommodations

Biology 102 Lab Policies

Laboratory Blackboard:

The laboratory has its own Blackboard site separate from lecture and recitation. All information and materials pertaining to the lab will be posted herein. This includes, but is not limited to, important announcements, the laboratory manual, lab PowerPoints, lab homework submission links, lab exams, and the lab discussion board. **Students are responsible for checking their John Jay e-mail account** regularly. Contact DoIT, **not** your Bio instructor, for help with e-mail or Blackboard.

Online Participation and Lab Blackboard Discussion Board:

To communicate as a class, we will use the Discussion Board tool on the lab Blackboard. Here you will find forums relating to homework, assignments, exams, and general questions or concerns. It is your responsibility to participate in these forums by asking questions, answering other student's questions, or stating any comments/concerns that you may have. There will be forums created for you or you may make your own. Some assignments may be provided in these forums. Check these forums regularly. It is very important to stay up to date with the course material, to login to the lab Blackboard site daily, and to ensure that all coursework is submitted on time. Failure to do so will result in missed grades, incomplete work and will result in a poor grade. If there is an event that will disrupt your participation in the course, it is your responsibility to notify the instructor as soon as possible.

Live Review Sessions:

Live review sessions will be held each week (check with your specific instructor for the dates and times) and participation in these are mandatory. Students are expected to have read the lab manuals and reviewed the corresponding PowerPoint slides PRIOR to attending the review session. This is to ensure that you have reviewed the material and have the necessary background to participate in the review session. If you have questions or are confused about a concept, the instructor will be taking live questions and answering them. These sessions will be recorded and posted on the lab blackboard for review purposes. **Participation in these sessions is an important component of this course.** You must attend the session or view the recording using the link provided in order for it to count towards your participation grade. Track statistics will be activated on the post to ensure that the session is viewed, and this action is accounted for.

Pre-Laboratory and Post-Laboratory Homework:

Each lab has two separate homework components - a pre-lab and a post-lab exercise. The pre-lab assignment is due on Wednesday (at 11:59:59pm) and the post-lab homework is due at the end of each week (Friday at 11:59:59 pm). The pre-lab assignment should include a written purpose explaining the goals for the lab, as well as the answers to the HQ questions that are embedded within the lab manual. The post-lab assignment should include your results obtained from the lab and a written conclusion explaining these results. The Final Wrap Up section of your lab manual will assist you with this. Include the answers to any question asked in this section. The post-lab assignment should also include the answers to the post-lab questions found at the end of each lab manual. These assignments will be submitted to the lab Blackboard and checked for plagiarism using SafeAssign.

Labster Simulations:

Labster simulations will be used that will provide a virtual lab learning experience. These simulations take approximately 30-45 minutes to complete. **The first attempt at the simulation will be graded**. Simulations will be available at the beginning of each week and will be due each Thursday at 11:59:59pm. If you have a technical issue while doing a labster simulation, you must email your instructor AND email labster support. There is a 24 hour chat option for technical assistance. **It is your responsibility to notify the instructor as soon as an issue arises** (not at the end of the semester). Please refer to the following links for helpful tips and requirements:

Labster Basics: <https://help.labster.com/en/collections/681668-student-resources>

Basic Troubleshooting: <https://help.labster.com/en/articles/3944461-basic-labster-troubleshooting>

Minimum Requirements: <https://help.labster.com/en/collections/681650-technical-requirements>

Midterm and Final Exams:

The midterm exam will cover labs 1-5, while the final exam will cover labs 6-11. Exams will become available on the lab Blackboard at 11:00:00 AM and remain available for a 24-hour window (see the laboratory schedule for dates). Exams will disappear upon completion of this 24-hour window and must be submitted by 10:59:59 AM. You can take the exam at any time within the 24-hour window. Exams will be timed, and you will have 90 minutes to complete the exam once you begin.

Creative Assignment on Meiosis:

A creative assignment explaining the steps of meiosis is due on May 7th at 1:00:00 PM. Assignments will not be accepted after this date. More details regarding this assignment will be provided at the appropriate time.

Genetic Disease Report:

A report discussing the genetics of an assigned disease is due on May 7th at 1:00:00 PM. Reports will not be accepted after this date. This report will be submitted to the lab Blackboard and checked for plagiarism using SafeAssign. More details regarding this assignment will be provided at the appropriate time.

Laboratory Grades:

The laboratory section will comprise 30% of the course grade for Bio 102.

Lab grades will be based on the following required components:

Midterm exam	20%
Final exam	20%
Labster Simulations	10%
Pre-Lab Homework	10%
Post-Lab Homework	25%
Discussion Board/Review Participation	5%
Genetic Disease Report	5%
<u>Creative Assignment</u>	<u>5%</u>
TOTAL	100%

* The laboratory schedule is subject to change.

** All homework is due by 11:59:59 PM on the date provided. Pre-labs and post-labs must be typed and submitted to their respective submission links on the lab Blackboard. Graphs, tables, and Punnett squares must be made in excel or an equivalent software.

*** Exams will be available on the lab Blackboard at 11:00 am on the first date indicated. You will have 90 minutes to complete the exam once you begin. Exams are due and must be completed by 10:59:59 am on the final indicated date.

Week	Dates	Lab*	Review Sessions	Labster Simulations	Homework Due Dates (due at 11:59:59 PM)**		
					Pre-Lab	Labster	Post-Lab
1	Jan 29-31	INTRODUCTION	n/a	n/a	n/a	n/a	n/a
2	Feb 1-7	1: Scientific Measurements	Feb 4	Lab Safety	Feb 3	Feb 4	Feb 5
3	Feb 8-14	2: pH and Buffers	Feb 11	Acids and Bases	Feb 10	Feb 11	Feb 12
4	Feb 15-21	3: Organic Macromolecules	Feb 18	Introduction to Food Macromolecules	Feb 17	Feb 18	Feb 19
5	Feb 22-28	4: Osmosis and Diffusion	Feb 25	Cell Membranes and Transport	Feb 24	Feb 25	Feb 26
6	Mar 1-7	5: Enzyme Kinetics	Mar 4	Reaction Kinetics	Mar 3	Mar 4	Mar 5
7	Mar 8-14	Midterm Review Session and MIDTERM EXAM (Labs 1-5): Mar 12 at 11:00:00 AM until Mar 13 at 10:59:59 AM ***					
8	Mar 15-21	6: Energetics, Fermentation, and Respiration	Mar 18	Cellular Respiration (Principles)	Mar 17	Mar 18	Mar 19
9	Mar 22-28	7: Photosynthesis	Mar 25	Pigment Extraction	Mar 24	Mar 25	Mar 26
10	Mar 29-Apr 4	SPRING RECESS					
11	Apr 5-11	8: Mitosis	Apr 8	Cell Division (Principles)	Apr 7	Apr 8	Apr 9
12	Apr 12-18	9: Fly Genetics - Introduction	Apr 15	Mendelian Inheritance	Apr 14	Apr 15	Apr 16
13	Apr 19-25	10: Fruit Fly Genetics - Phenotypic Analysis & Chi-squared	Apr 22	Animal Genetics	Apr 21	Apr 22	Apr 25
14	Apr 26-May 2	11: Forensic DNA Analysis	Apr 29	Polymerase Chain Reaction	Apr 28	Apr 29	Apr 30
15	May 3-9	FINAL EXAM REVIEW SESSION Creative Assignment on Meiosis Due on May 7 at 11:59:59 PM Genetic Disease Reports Due on May 7 at 11:59:59 PM					
16	May 10-16	Final Exam on Labs 6-11 (May 14 at 11:00:00 AM until May 15 at 10:59:59 AM)***					

MSRC Workshop Schedule for Bio 102

Note: Most workshops will run **Tuesday** during community hour. Additional workshops may be scheduled. You can use the link here (<https://www.jjay.cuny.edu/che-and-bio-resource-page>) to view workshop descriptions and to register (<https://jjay-cuny.zoom.us/meeting/register/tZYsdOmrpzljGtA8uq5u7gbYVdfrF9XAWNrT>).

Date	Workshop Title
Jan 29 and 30	Navigating Blackboard and Registering for Mastering Biology
2-Feb	Workshop 12: Mitosis and Meiosis (Chapters 12-13)
9-Feb	Workshop 12: Mitosis and Meiosis (Chapters 12-13)
16-Feb	Workshop 12: Mitosis and Meiosis (Chapters 12-13)
23-Feb	Workshop 13: Probability Laws and Mendelian Inheritance (Chapter 14)
2-Mar	Workshop 13: Probability Laws and Mendelian Inheritance (Chapter 14)
9-Mar	Workshop 14: Linked Genes (Chapter 15)
16-Mar	Workshop 14: Linked Genes (Chapter 15)
23-Mar	Workshop 15: DNA (Chapter 16)
30-Mar	SPRING BREAK
6-Apr	Workshop 16: Introns and Exons (Chapter 17)
13-Apr	Workshop 16: Introns and Exons (Chapter 17)
20-Apr	Workshop 17: Regulation of Gene Expression (Chapter 18)
27-Apr	Workshop 17: Regulation of Gene Expression (Chapter 18)