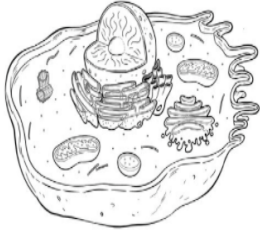


BIOL 103: CELL BIOLOGY Course Syllabus (Spring 2019)

Instructor: Dr. Jennifer Betancourt, Ph.D.

E-mail: jabetancourt1@pipeline.sbcc.edu Email is my preferred method of communication- please use my email address directly. Do not rely on Canvas; there are frequent delays in email reception. Kindly familiarize yourself with the "Email Policy" (below) before sending an email.



Office Hours:

Mondays- 8:00am – 9:30am EBS 313 (By appointment, made 24h in advance)
Mondays- 10:40am – 11:10pm EBS 313 (Drop in, first come-first serve)
Mondays- 12:15pm – 3:15pm EBS125A (Drop in, first come-first serve)

Office Location & Phone: EBS 125A; (805) 730 – 4123

Peer Assisted Learning (PAL) Tutors

- Spencer Ekola: sfekola@pipeline.sbcc.edu
- Jessica Kretschmer: jlkretschmer@pipeline.sbcc.edu
- Areli Lopez: aelopez10@pipeline.sbcc.edu

PAL sessions in EBS 125B (may be revised to better accommodate student needs)

possible extra credit opportunity for attending weekly sessions

- Mondays- 10:30am - 12:00pm (Spencer); 12:00pm - 1:30pm (Areli)
- Tuesdays- 11:00am - 12:30pm (Areli); 1:30pm - 3:00pm (Jessica)
- Wednesdays- 12:00pm - 1:30pm (Spencer), 4:00pm - 5:30pm (Areli); 5:30 - 7:00pm (Jessica)
- Thursdays- 12:00pm - 1:30pm (Jessica), 1:30pm - 3:00pm (Spencer)

Introduction:

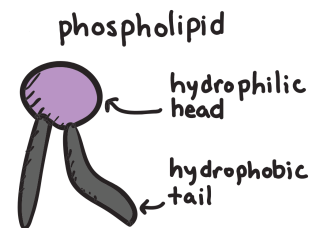
Welcome to BIOL 103 and the fascinating study of the cell, the fundamental unit of life. On a cellular level, we will discuss typical cell processes, structures and functions. On a molecular level, we will dive deep into the structure and function of the four major macromolecules and explore the specific and collaborative roles of each in the cell. This course also includes an overview of the scientific method, that of which *you* will practice implementing during lecture and lab.

This may be one of the most challenging, rigorous and demanding courses you take during your academic career. However, I am confident that if you devote sincerity, efficient use of time and interest, you will be amazed at everything that one tiny little cell can do. Additionally, your time and effort will be strongly correlated with the sense of self-reward and confidence. This is a 5.5 unit course designed for students who intend to major in a Biology discipline and are genuinely interested in a career in biological sciences. In order to be the best student *you* can be, **plan to spend at least 12 hours per week *outside* of class** each week reading, studying, taking notes and preparing for this course.

Course Pre-requisites:

ENG 110 or 110H, MATH 107 or 111, and CHEM 155 or 104

In addition to these pre-requisites, I *strongly* recommend that you previously completed BIOL 101 and BIOL 102 with a grade of C or better.



Course Format:

Lecture (Lec): 680 points = exams(400), class activities(25), discussion(130) and literature review(125)

Tuesdays AND Thursdays 7:50am – 9:10am (EBS 309)

- Students are responsible for all information disseminated by the instructor during class.
- Class lecture notes will primarily be annotated on the blackboard. I do not provide study guides or my personal lecture notes.
- Powerpoint slides are used minimally- and only as a supplement, not a substitution, to blackboard notes. To ensure your best understanding of content, come to class and actively take notes.
- You MAY take photos of the chalkboard or record lectures ONLY if you have received prior approval by your instructor.
- **Unannounced in-class activities:** 3-5 points each, for a maximum of 25 points. There are no make-ups. Thus, it is really important to show up, ON-TIME, EVERYDAY!
- **Exams:** There will be *two midterms and one final* exam. Exams are cumulative, with an emphasis on content presented since the previous exam. Exam format includes any of the following: multiple choice, true/false, fill-ins, short answers, and/or drawings. **There are NO make-up exams.** Please confirm that you are able to attend all scheduled exams. (See lecture and lab schedules for dates.)
- **Literature Review (Written and Oral):** In a team of two, you will complete a thorough review on a recent/hot research topic in Cell or Molecular Biology. Specific assignment and formatting requirements will be posted on Canvas. This project is worth 125 total points and includes:
 - ✓ A submitted timeline of due dates and persons responsible (7 points)
 - ✓ A peer review of rough draft (18 points)
 - ✓ A powerpoint presentation/oral seminar (15 points)
 - ✓ A 3000-4500 word (~12-16 double-spaced pages) research paper (85 points). Although late submissions for the written portions of the assignment are allowed, they are strongly discouraged. Please review the “Late Submission of Assignments” section of the syllabus.

Discussion (DQ); constitutes 130 points of the lecture component.

You must attend the discussion section you are officially enrolled in.

Monday 9:35 am – 10:35 am (EBS 313) OR

Monday 11:10pm – 12:10pm (EBS 313) OR

Friday 8:30am – 9:30 am (EBS 209)

- **When/Where assignment is posted:** *Each week*, you will be assigned a set of discussion/study questions. They will be posted on Canvas by Tuesday at 11:00pm. Look in the “Weekly Modules” or in Files → “Discussion” folder.
- **Format:** Calibri or Arial 10-12 point font; double sided is OK, single space OK but skip line between answers.
 - Header- Last name, First (Betancourt, Jenn); Discussion Day/time (i.e. DQ M935),
 - Title- (Date: Discussion Set # x);
 - Body- number your answers (you do not have to re-type questions, but students do find it helpful when studying later); drawings/schematics are to be *hand-drawn* and well labeled (colored pencils/pens encouraged) and are due with the hard copy only.
 - Footer- page number



- **Point break-down:** There will be 11-14 DQ sets, depending on progress we make as a class. Each set is worth 7-13 points. You may score up to a maximum of 130 points for the semester. The point break down for each set is as follows:
 - 7 points: electronic submission, correctness- 1-2 questions graded at random
 - 3 points: hard copy submission AT discussion (or other specified time)
 - 3 points: participating in group work AT discussion, if applicable
- **Canvas Submission:** Each assignment is due electronically (Canvas) by *Sunday at 11:00pm*, unless otherwise noted. To be eligible for “electronic submission/correctness points” the assignment must be complete and submitted on time. I will not accept late submissions. The Canvas window is disabled at 11:00pm sharp, so it is best that you start the submission process no later than Sunday at 10:55pm. However, you can submit your assignment as early as Friday. It is also a good idea to get a confirmation (screenshot) of the submission. If you miss the Canvas submission, you can still be eligible for hard copy and participation points.
- **Hard Copy Submission:** To earn “hard copy” points, you must turn in a hard copy (*stapled*) that is identical to the Canvas submission, with the exception of any drawings. The hard copy is due at the beginning of your discussion section. I do not accept submissions to my office or mailbox. If the hard and electronic copies differ from one another, I will grade the Canvas copy.
- **Opportunity to score 100%:** A weekly set of questions enables you to engage with the course material more than just once (in lecture). It’s a way to test your understanding and serves as a good study guide. That being said, life gets hectic sometimes so if you miss a submission deadline or a discussion, you can definitely recover, and still earn 130/130 for discussion points.

Laboratory 320 points: *in-class activities (50), lab reports (225), lab notebook (45).*

Tuesdays 9:30am – 2:10pm (EBS 313) OR Thursday 9:30am – 2:10pm (EBS 313) OR Friday 9:45am – 2:25 am, EB 209

- **Attendance:** To maintain your enrollment position in the course, make sure to attend the first two labs AND make sure not to miss more than one lab session between weeks 3-15. Failure to comply will result in being dropped from the course or becoming ineligible to pass the course. You must attend the lab you are enrolled in. Due to limited funding, resources and space, if you miss a lab, you will not be able to make it up.
- **Arrive prepared:** Bring relevant materials such as protocols, worksheets AND your lab notebook. Without these materials, you may miss the opportunity to earn lab points. Read the lab manuals and complete pre-labs BEFORE you arrive. Oftentimes there are pop-quizzes or lab notebook checks at the start of lab.
- **During lab:** Each week you will complete any of the following tasks: Biological experiments, data prediction/analysis, writing/revising lab reports, peer review, and/or literature research. Most work is to be completed in small groups of 2-4 (TBD by instructor). During downtime, you may have the opportunity to study/work on Bio103 assignments; other coursework is prohibited with the exception of instructor approval.
- **Lab Notebook (45 points):** You are required to bring your lab manual and notebook to each lab. Each week, you will complete a *pre-lab* entry in laboratory notebooks (details to be discussed). This is due at the beginning of class, and will be checked for completion. During lab, you will complete the entry with methods, results and conclusions. Your notebook will be assessed throughout the semester at random (15 points) and again at the end of the semester (30 points). There is a “NO late submission” policy for the laboratory notebook. NO EXCEPTIONS.



- **Planned and/or unannounced in-class activities (50 points):** worth 3-10 points each, for a maximum of 50 points. There are no make-ups for in-class worksheets and/or activities and they may not be turned in late. Thus, it is very important to show up on time for every lab!
- **Lab reports (225 points):** You will complete three reports (in groups or independently, TBD). Formatting requirements will be specified for each assignment. Reports are to be submitted on Canvas AND hard copy by the specified day/time. Although late submission for lab reports are allowed, it is strongly discouraged. Please review the "Late Submission of Assignments" section of the syllabus.

Overall Expectations

**To pass Bio103, you must pass the laboratory component with a minimum of 241 points AND the lecture component (which includes discussion points) with a minimum of 469 points.*

**To pass Bio103, you must complete and submit all major assignments and exams for lecture, lab and discussion.*

**It is your responsibility to print and bring necessary documents with you to all components of this course. Repeated failure to do so will result in point deductions.*

**It is your responsibility to check the syllabus and for how each assignment is to be submitted.*

**It is your responsibility to keep track of earned points- it is advisable that you generate an excel spread sheet to document points and organize/save all graded assignments that have been returned to you.*

**If you are taking BIO103 for the second time (or more), please understand that you may not copy/paste any portion of your lab reports. There is a zero tolerance for this behavior. Failure to comply will earn you a zero on the assignment and the loss of privilege to work in partners for remaining assignments.*

**I rarely, if at all, offer extra credit assignments. I may, however, incorporate bonus points into assignments and/or exams. Regardless, I kindly request that you refrain from asking me about it.*

***CELL PHONES are NOT ALLOWED.** Please silence and put them away for the duration of the class. You may not use your phone as a means to view course material. NO EXCEPTIONS. Repeated offenses will result in point deductions. I make rare exceptions.



***Computer/tablet use:** Though they are not required or necessary, you may use computer/tablets during lecture and lab (unless otherwise instructed). Please do not abuse in-class computer/tablet privilege by using them for other coursework or leisure. Failure to be responsible will result loss of privilege and/or point deductions.

**I reserve the right to modify the schedule and/or assign additional readings or videos as I see fit. I intend to follow the schedule as it is written, but flexibility is sometimes necessary when it comes to science and science learning.*

Course Materials and Online Resources

Canvas- Online LMS and SBCC email: It is your responsibility to check and familiarize yourself with Canvas. The course syllabus, lecture slides, additional (non text-book) readings/videos, worksheets, discussion topics/questions and important announcements will be posted here. Additionally, check your pipeline email daily. I cannot read or reply to emails other than sbcc emails.

turnitin.com: Electronic submission through Canvas will automatically be filtered through the plagiarism website, turnitin.com. Unless otherwise instructed, no further action on your part is required. Your first submission onto turnitin.com is your final submission- as such please ensure you are uploading the correct version of the assignment. To avoid late penalties, submit assignments before the deadline. **TAKE A SCREEN SHOT of successful submission.**

Textbook (REQUIRED): Alberts, B., et al., *Molecular Biology of the Cell*, Garland Science, 6th ed. (2014) ISBN: 9780815344322. The assigned reading will be based on this edition. However, you may also use the 5th ed. (2002) ISBN: 9780815341055, but it will be your responsibility to determine the appropriate pages to read. So that you are prepared for lecture, **complete assigned readings BEFORE class. But more importantly, review lecture notes ASAP once class is over!**

**You may also access a free Biology e-textbook and use as additional content support
<https://openstax.org/details/books/biology>*

Laboratory Manual (REQUIRED): I will post lab manuals/protocols for the upcoming week by Sunday evenings. Download and print them at home or from an SBCC computer lab. To earn possible points, you must have a hard copy of the protocol that you will be using that day (check syllabus for lab activity schedule). You may not use lab time to go print.

Laboratory Notebook (NB) (REQUIRED): Purchasing a black/white composition notebook to keep record of all laboratory activity/ information. Have your NB by the start of 2nd week of lab to avoid point deductions. Use “**Lab Notebook Guidelines**” (Canvas) for format expectations. Bring it to every lab and anytime you meet me (or tutors) to discuss lab work. Keep it up to date. A final submission is due at the end of the semester.



*****Class/lecture, lab or DQ notes must be written in a separate notebook.*****

Course Grading:

Assignment grades will be posted on Canvas. Course letter grades are based on the number of **POINTS earned**. I will NOT round to the nearest percentage- **NO EXCEPTIONS**. Please note that **you must individually pass the lecture component AND lab component to pass the entire course.**

Assignment	% / possible points	
Midterm #1:	10.0%	100 points
Midterm #2:	12.5%	125 points
DQ sets/in-class activities:	15.5%	150 points
Literature Review:	12.5%	125 points
Final Exam:	17.5%	175 points
Lab component	32.0%	320 points
TOTAL: 100% 1000 points		
(*See above for Lab point breakdown)		

Grade Scale in points (I do NOT round)		
A+	980-1000	(98.0 - 100%)
A	930- 979	(93.0 - 97.9%)
A-	890- 929	(89.0 - 92.9%)
B+	870- 889	(87.0 - 88.9%)
B	830- 869	(83.0 - 86.9%)
B-	780- 829	(78.0 - 82.9%)
C+	750- 779	(75.0 - 77.9%)
C	690- 749	(69.0 - 74.9%)
D	580- 689	(58.0 - 68.9%)
F	0- 579	(0.00 - 57.9%)

Email Etiquette Policy

Please allow at least 24-36 hours for a response to emails during the week (Sunday 5pm-Friday 1pm). It is possible that I will respond sooner, but it is not guaranteed. If I have not responded in 36 hours, feel free to email me again. Please understand that if you send an email over the weekend (Friday 1pm – Sunday 5pm), it is possible that I will not respond until Monday evening.

As part of an effort to help you develop your professional communication skills, I am instituting a semi-formal email etiquette policy. At a minimum, by addressing the following prompts, the goal of your email will be clear, and more importantly, I will be able to efficiently and quickly address your question/concern.

1. Can your answer be found in the syllabus or any other class resource? Please make an effort to try and find the answer before emailing. If the answer is not in class resources, then proceed with writing an email. Please note that if your answer *can be* found in class resources or was part of an announcement made in class, I may not reply.

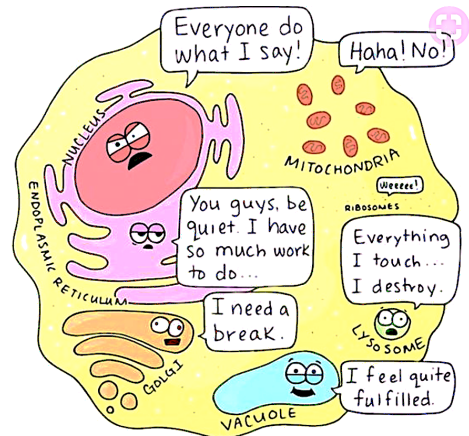
2. Does your email have a clear subject line? Never leave the subject line blank. Additionally, be clear and concise. I will ignore all emails with blank subject lines. Include DQ section day and/or Lab day (depending on the content of the email.) **“Re: DQ Glycolysis Question, DQ M935”**

3. Did you include a professional “Greeting”? **“Dear, Hello, Hi”** or simply, just my name (Dr. Betancourt or Dr. B) will suffice. You should only refer to a professional by their first name after they have made it clear that you may.

4. Is your email short, concise and to the point? Please keep in mind that I receive many emails from students each day. Convey your thoughts succinctly and quickly. If your email requires you (or me) to write a long explanation, please email me with a **“Request to meet about...”**

5. Use standard punctuation, capitalization, spell/grammar. Always strive to present yourself in a professional and thoughtful way. Do so, by quickly editing emails.

6. Did you use a professional e-signature or salutation? A simple “Thanks, Sincerely, or Best Regards, etc.” will suffice.



If organelles could talk

Late Submission of Assignments

Unless otherwise noted, assignments are due at the BEGINNING of class (AND on Canvas when instructed). It is your responsibility to know when and how assignments are to be submitted. The only assignments eligible for late submission are: Lab Reports and the Written Component of the Literature Review.

If you do not submit your assignment ON-TIME, the entire assignment is considered late, regardless of whether or not you submitted the hard copy on time. Exceptions will only be made for valid documented excuses approved by the instructor.

Late assignments will earn penalties, and it will likely take longer to receive your grade!

- Submitted by 11:59 p.m. on the due date = 10% deduction
- Within the next 24 hour period thereafter = 25% deduction (can use this only once)
- No submission after that.

TO SUBMIT A LATE ASSIGNMENT, do ALL of the following:

- 1) Email a pdf to Dr. Betancourt as a time-stamp,
- 2) Upload the assignment to the appropriate LATE folder on Canvas (if applicable)
- 3) Print and deliver a hard copy of the assignment to Dr. Betancourt ASAP.

TO BE CONSIDERED FOR EXCUSED ABSENCE:

- 1) Contact Dr.B. within 24 hours of absence via email, **AND**
- 2) Provide valid written documentation within 48 hours of the absence (e.g. police report, letter from health care provider etc.) **NO EXCEPTIONS.**

Academic Integrity <http://www.sbcc.edu/studentlife/AP%205550%20Academic%20Integrity.pdf>

It is your responsibility to read, review and understand SBCC's policies and definitions of Academic Integrity and Misconduct. If you have questions, please inquire BEFORE it is too late. All assignments you submit must be entirely your own original work and cannot be copy/pasted from *any* previous class.

- I maintain a **ZERO TOLERANCE** policy toward academic misconduct of any kind. This includes academic dishonesty, cheating, fabrication, plagiarism etc. DO NOT DO IT.
- Unless it is an established group assignment, you must never use anybody else's work, even as a template (this includes web sources). You *may* collaborate with others when brainstorming, but you must individually write your own written assignments.
- If you are re-taking this course, you must reword previous documents. **I do not allow copy/pasting.**
- Never give your work to another student to use. This is academic misconduct.
- Everything you turn in must be stated in your own words even if you cite the source. Changing just 1-2 words of or reorganizing a sentence from a book, journal article or internet site is NOT saying it in your own words, and thus is plagiarism. It is not suffice to put work in quotes.
- Sources of information used must be properly cited- (See Reference guidelines)
- **Students who commit any degree of academic misconduct will receive an F in the course, be reported to the Dean and will be subject to the most severe academic penalties. NO EXCEPTIONS!**

Add/Drop Deadlines

It is your responsibility to familiarize yourself with the add/drop deadlines. Take necessary action with the office of Admissions and Records when necessary, so as to not adversely affect your academic record. Please inform me if you are withdrawing so I can make adjustments.

January 26: final day to drop the course without a "W" and receive a refund;

January 27: final day to drop the course without a "W" but **no refund**;

February 14: deadline to petition for a grade of pass/no pass;

March 15: deadline to withdraw from the course with a "W" (and no refund).

Students that qualify (or feel they qualify) for classroom accommodations

Disability Services and Programs for Students (DSPS) coordinates all academic accommodations for students with documented disabilities at Santa Barbara City College. If you have, or think you might have, a disability that impacts your educational experience in this class, please contact DSPS to determine your eligibility for accommodations. DSPS is located in the Student Services (SS) Building, Room 162. Their phone number is [805-730-4164](tel:805-730-4164).

If you are already registered with DSPS, please submit your accommodation requests via the '**DSPS Online Services Student Portal**' as soon as possible. Once submitted and confirmed **please visit with me** about your specific accommodations, preferably by the end of the third week of the semester.

Inclusivity Statement

Along with the SBCC community, I fully support the academic, professional, and personal growth of ALL students without regard to: race, ethnicity, religion, national origin, immigration status, age, gender identity, sexual orientation, language, socioeconomic status, medical status or disability. If ever you face discrimination or hate, inside or outside the classroom, please come talk to me. I will help you identify resources and determine a plan of action.



A few final words from me to you:

I am very excited to work with you this semester. My goal as an instructor is to help you discover the fascinating world of cell/molecular biology and to help you realize that you are an important member of

the Cell Biology Community. It can be overwhelming at times, but time management and seeking help early on is key. I am here and happy to help. This is YOUR education and YOUR LIFE- get involved, take charge and go for it. Stay Gritty!

SBCC approved Student Learning Outcomes (SLOs) for BIOL 103:

1. Drawing upon a detailed knowledge of the structure and function of macromolecular assemblies, organelles, and enzymes, formulate hypotheses of what homeostatic mechanisms would cause stability in cells.
2. Complete a review of scientific literature on a particular topic in cell biology using web and library searches and produce a report that rigorously and coherently summarizes recent findings.
3. Using knowledge of the physical principles of atom and molecular structure, explain the chemical interactions of molecules during diverse metabolic pathways and electron transport chains.
4. As a member of a research team, demonstrate skills in the use of sophisticated and semi-sophisticated laboratory equipment, and compile the results of these protocols in research reports presenting conclusions using that integrate multiple working hypotheses.
5. Differentiate between the narrative description of a biological process and the mechanistic explanation of how a process using physical, chemical and biological principles as applied to specific examples of cell processes.
6. Delineate the hierarchy of organismal structure from molecules to organ systems and explain the influence of environmental, medical, and behavioral modification on the healthy and proper functioning organisms