



TENTATIVE—SUBJECT TO CHANGE

BIOLOGY (BIOL) 1111L: Biology I Lab

ON CAMPUS (CA) COURSE SYLLABUS

Fall Semester 2023: Wednesday & Thursday

COURSE INFORMATION

Credit Hours/Minutes: 1/2250

Class Location: Vidalia Campus/Health Sciences Annex (HSA) Building C: Room 902

Class Meets: W, TH 11:45am-1:00pm

Course Reference Number (CRN): 20140, this course is taught in an on-campus format (CA) at the STC campus.

Preferred Method of Contact: Email [Sherry Sturgis \(ssurgis@southeasterntech.edu\)](mailto:ssurgis@southeasterntech.edu)

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Sherry C. Sturgis Beasley

Bio: I received my B.S. and M.S. in Biology from Georgia Southern University, with an emphasis in Ecology. I am an Ecologist, Conservationist, and Environmental/Nature Educator. I have taught many courses in Science, especially Biology in the field of higher education. I love all aspects of Biology, especially Anatomy & Physiology and Microbiology. I also enjoy teaching Forensic Science.

Office Location: Vidalia Campus/Health Sciences Annex (HSA) – Building C: Room 901

Office Hours: M-W 8:30am-11:30am & TH 8:00am-9:00am

Email Address: ssurgis@southeasterntech.edu

Office Phone: (912) 538-3188

Cell: (912)-531-4543, Please text me first, and do not use this number unless you really need to reach me. I do not mind you contacting me by cell phone, just don't abuse the privilege.

Fax Number: NA

Tutoring Hours: By appointment only, I will be glad to set up a tutoring session during office hours.

SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND STUDENT HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Student Handbook](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php) (<http://www.southeasterntech.edu/student-affairs/catalog-handbook.php>).

REQUIRED TEXT

1. Biology, Mader & Windelspecht, 12th edition, McGraw Hill
2. Laboratory Manual to accompany Biology, Mader, 12th edition, McGraw Hill

REQUIRED SUPPLIES AND SOFTWARE

3 hole binder, [clear front report cover](#) (make sure it is sturdy and can hold 100 pages or more), [colored pencils](#), ink pens, highlighter, and any other supplies deemed necessary by instructor.

Ink pens, highlighters, and any other supplies deemed necessary by the instructor.

Note: Although students can use their smart phones and tablets to access their online course(s), exams, discussions, assignments, and other graded activities should be performed on a personal computer. Neither Blackboard nor Georgia Virtual Technical Connection (GVTC) provide technical support for issues relating to the use of a smart phone or tablet so students are advised to not rely on these devices to take an online course.

Students should not share login credentials with others and should change passwords periodically to maintain security.

COURSE DESCRIPTION

Provides an introduction to basic biological concepts with a focus on living cells. Topics include chemical principles related to cells, cell structure and function, energy and metabolism, cell division, protein synthesis, genetics, and biotechnology.

MAJOR COURSE DESCRIPTION/COMPETENCIES

1. Lab Safety
2. Microscope use and microscopic observation
3. Organization and Chemical Basis of Life
4. Cell Structure and Function
5. Metabolism
6. Cell Division
7. Protein Synthesis
8. Central Dogma of Biology
9. Genetics
10. Biotechnology
11. Evolutionary concepts

PREREQUISITE(S)

Regular Admission

Co-requisites: All Required

BIOL 1111

COURSE OUTLINE

LABORATORY SAFETY

1. Discuss and apply laboratory exercises encompassing the appropriate practice of laboratory precautions and laboratory safety

MICROSCOPE USE AND MICROSCOPIC OBSERVATION

2. Perform and apply laboratory exercises encompassing proper use of the microscope for microscopic observations

ORGANIZATION AND CHEMICAL BASIS OF LIFE

3. Perform and apply laboratory exercises encompassing organization and the chemical basis of life

CELL STRUCTURE & FUNCTION

4. Perform and apply laboratory exercises encompassing the cell and cell function

METABOLISM

5. Perform and apply laboratory exercises encompassing metabolism

CELL DIVISION

6. Perform and apply laboratory exercises encompassing cell division

PROTEIN SYNTHESIS

7. Perform and apply laboratory exercises encompassing protein synthesis

THE CENTRAL DOGMA OF BIOLOGY

8. Perform and apply laboratory exercises encompassing the central dogma of biology

GENETICS

9. Perform and apply laboratory exercises encompassing genetics

BIOTECHNOLOGY

10. Perform and apply laboratory exercises encompassing biotechnology

EVOLUTIONARY CONCEPTS

11. Perform and apply laboratory exercises encompassing evolutionary concepts

GENERAL EDUCATION CORE COMPETENCIES

STC has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

STUDENT REQUIREMENTS

In order to be successful in this class, students should study a minimum of 2 hours per credit hour each week (minimum of 8 hours). Before arriving for class, students should read and study lectures, complete the learning objectives, read the assigned chapters we have covered in the lecture course and be familiar with the topics, and review lab materials discussed and given by the instructor. The instructor will also review lab topics with you prior to the labs being covered. All lab assignments must be completed and turned in by the due date. It is important to keep up with your work and not get behind. It is important that you show up for lab, labs will not be repeated. If you miss a lab, you will not receive credit.

Students are responsible for the policies and procedures in the STC Catalog and Handbook. Additionally, during exams, students are to place all notebooks, bags, and other belongings on the floor or on the counters located in the back and sides of the classroom. Also during examinations students are to be seated with one empty chair between each student. No talking is permitted once the exams are handed out. Students are not allowed to leave the room during an exam (with their cell phone). Students need to go to the bathroom prior to the exam. The instructor will make an exception for emergencies. **Students found with their cellphone or any other personal communication device (including smart watches) will be considered cheating and given a zero for the exam. This includes taking out a phone or similar device after the student has completed the exam but while others in the classroom are still testing.**

Students are expected to exhibit professional behavior at all times. Each student is to show respect and concern for fellow students and for the instructor. Insubordination will not be tolerated, and disciplinary measures will be enacted.

As students taking this course may be striving to become healthcare professionals, they will be expected to follow certain healthcare program rules. This includes but is not limited to: proper dress (when in lab setting or other activities in class), no perfumes or strong fragrances, cleanliness (hands, clothes, hair), and effective communication skills.

Per STC policy no cell phones are allowed in hallways or in classrooms. If your phone must be with you it must be turned off and in a bag. In cases of emergency when a student needs his or her phone, he or she is expected to 1) notify the instructor before class begins and 2) leave the phone on silent (NO VIBRATE) while they are in the class (this excludes examination guidelines for phones). No personal calls are to be taken during class, regardless of the situation. This should be handled before or after class.

No eating or drinking is permitted in the lab or lecture classroom. Water is allowed if it is in a spill-proof container and must be kept under the desk or on the sides of the classroom.

ATTENDANCE GUIDELINES

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of "F" (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an "F" in a course.

STUDENTS WITH DISABILITIES

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

Swainsboro Campus: [Emily Jarrell \(ejarrell@southeasterntech.edu\)](mailto:ejarrell@southeasterntech.edu), 478-289-2259, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas, \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

SPECIFIC ABSENCES

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

PREGNANCY

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

Swainsboro Campus: [Emily Jarrell \(ejarrell@southeasterntech.edu\)](mailto:ejarrell@southeasterntech.edu), 478-289-2259, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas, \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery **MAY NOT** be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (March 12) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" is assigned for the course(s) when the student completes the withdrawal form.

Students who are dropped from courses due to attendance after drop/add until the 65% point of the semester will receive a "W" for the course.

Important – Student-initiated withdrawals are not allowed after the 65% point. Only instructors can drop students after the 65% point for violating the attendance procedure of the course. Students who are dropped from courses due to attendance after the 65% point will receive either a "WP" or "WF" for the semester. Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of 'W' will count in attempted hour calculations for the purpose of Financial Aid.

FINAL ELIGIBILITY AND FINAL EXAMINATION

A comprehensive final examination will be given at the end of the semester. All students in the course will complete the Final Exam on the specified date and time as stipulated in lesson plan outline. There will be **no make-up exam** for the final examination. To determine if you are eligible to take the finals, a student must maintain a **Lecture and Lab Test average of seventy percent (70%) or above prior to the date of the scheduled final exam**. Grades of 69.9% will not be rounded up. If the student has below a 70% average, the student will be given a letter grade based on Tests average. Blackboard assignments, Learning Objectives, Discussion Boards, etc. are **not** included in the Test average, **only test grades**.

MAKEUP GUIDELINES (TESTS, QUIZZES, HOEMWORK, PROJECTS, ETC.)

Students will be allowed to make-up **one** examination (one lecture and one lab), **EXCLUDING** the final examination, due to an extenuating circumstance. This should be discussed with the instructor. Please submit official copy of medical, court documentation/jury duty, or any other formal written documents supporting the reason for missing a test. **Any other test missed will result in an automatic grade of zero.** **Note:** If student notifies instructor regarding inability to complete assignments because of technical problems **after due date**, the student will **NOT** be allowed to make-up the assignments. All make-up exams will be conducted face to face (FTF) on the scheduled date.

Lab examinations: Students will be allowed to make up one lecture examination (excluding the final exam), due to a documented, excused absence approved by the instructor. Any subsequently missed lecture exam will result in an automatic zero. A lab exam can be made up within a week of the missed exam, after this time, students will be required to take the exam at the end of the semester. The end of the semester exam is of a short answer/essay format.

Labs & Lab assignments: There will not be time set aside for making up labs. It is too time consuming to set up a lab again for one or two students. If you miss a lab, be prepared to take a zero. If you have a **documented, excused absence** approved by instructor, she will give an alternative assignment. If you miss a lab, you cannot receive credit for the lab assignment.

Research Article Review: There is no make-up for this assignment, unless emergency (at the instructor's discretion.)

ASSIGNMENTS

Students will be asked to bring a three prong notebook for lab class. This is for your lab activities, lab reports & related assignments. All lab related work, lab reports and assignments should be completed on the due date and kept in the notebook. Any new work or related lab material given by the instructor should also be kept in this notebook. Your work should be organized, neat and easy to read. You must attend the labs and complete the required work to receive credit for labs.

RESEARCH ARTICLE REVIEW

Students will be given a research article for review. Research articles will be related to our studies. Students will be expected to read the article and write a summary about their research article. This may be conducted individually or as a group. Students will be required to briefly discuss their article with the class. A copy of your summary must be turned in when your article review is discussed in class. Your summary must be a minimum of 1 page. A copy of this summary must be given to the instructor with a copy of the article on the day of the presentations. Please see the rubric at the end of the syllabus.

ACADEMIC DISHONESTY POLICY

The STC Academic Dishonesty Policy states All forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the STC Catalog and Student Handbook.

PROCEDURE FOR ACADEMIC MISCONDUCT

The procedure for dealing with academic misconduct and dishonesty is as follows:

1. First Offense

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

2. Second Offense

Student is given a grade of "WF" (Withdrawn failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

3. Third Offense

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

STATEMENT OF NON-DISCRIMINATION

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes. The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer	Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 st Street, Vidalia Office 165 Phone: 912-538-3126 Email: Helen Thomas hthomas@southeasterntech.edu	Until HR position is filled, contact Denise Powell, VP of Administrative Services Vidalia Campus 3001 East 1 st Street, Vidalia Office 138C Phone:912-538-3162 Email: Denise Powell dpowell@southeasterntech.edu

ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College's website.

ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and Banner Web via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT

The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.

GRADING POLICY

Assessment/Assignment	Percentage
Lab Exams	40%
Labs, Lab Assignments & Lab Reports (in class & homework)	30%
Biology Article Review (Summary)	10%
Comprehensive Final	20%
Total	100%

GRADING SCALE

Letter Grade	Range
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

DISCLAIMER STATEMENT

Instructor reserves the right to change the syllabus and/or lesson plan as necessary. The official copy of the syllabus is located on the STC M-Drive and will be discussed on the first day of class. The syllabus displayed in advance of the semester in any location is for planning purposes only.

BIOL 1111L: Biology Lab

Fall Semester 2023 Lesson Plan

Subject to change at instructor's discretion

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
Week of 08/23 & 08/24 (Wednesdays & Thursdays)	Introduction to the Course, syllabus review, outline, regulation, etc. 1: A View of Life & Ecology 2: Basic Chemistry	In Class: Introductions, Syllabus Review, Group Project Group Assignments, File creations, Intro to Biology Basic Chemistry Lab 1- Biology Quiz Lab Safety Microscope parts Microscope introduction Ecology-Species	Read the chapters for each week before coming to class and complete the learning objectives weekly (found on the M-Drive & in Blackboard. Note: Lab Reports should be placed in your notebook after competition weekly. Notebooks will be checked every two weeks in lab class.	C: 1-11 G: a-c
08/30 & 08/31 09/04, Labor Day Holiday, no class at STC this day	2: Basic Chemistry 3: The Chemistry of Organic Molecules	In Class: Basic Chemistry The Chemistry of Organic Molecules Macromolecules Lab 2- PH (acids & bases) Scientific Method Ecology-Species	Weekly lab report	C: 1,2,3 G: a-c
09/06 & 09/07	3: The Chemistry of Organic Molecules 4: Cell Structure and Function	In Class: The Cellular Level of Organization The Cell Prokaryote & eukaryote Functioning parts of cells Lab 3- Types of cells & cheek cell lab	Weekly lab report	C: 1-4 G: a-c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
09/13 & 09/14	5: Membrane Structure and Function	In Class: Cell membrane Osmosis & diffusion How the cell membrane functions Lab 4-Diffusion Ecology-Species	Weekly lab report Review for Lab Exam 1	C: 3-5 G: a, c
09/20 & 09/21	5: Membrane Structure and Function 6: Energy and Enzymes	In Class: What is energy, ATP Energy cycles Metabolism Proteins & enzymes Lab 5-ATP (Muscle use) Enzymes-Ripening of fruit	Lab Exam 1 on 09/21 (All labs & lab content up to this date) Weekly lab report	C: 5-7 G: a, c
09/27 & 09/28	7: Photosynthesis	In Class: What is photosynthesis What organisms use this process? How it works? Lab 6-Outdoor Botany & Photosynthesis	Weekly lab report	C: 4-5 G: a-c
10/04 & 10/05	7: Photosynthesis 8: Cellular Respiration	In Class: How photosynthesis works? What is cellular respiration? How it works? How the two processes are interrelated Lab 7- Stomata & Plant species	Weekly lab report	C: 4-5 G: a, c
10/11 & 10/12	8: Cellular Respiration	In Class: What is cellular respiration? How it works? How the two processes are interrelated Lab 8- Mycology	Weekly lab report Review for Lab Exam 2	C: 5-7 G: a-c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
10/18 & 10/19	9: The Cell Cycle and Cellular Reproduction	In Class: What is the cell cycle? How the cycle functions? How cells reproduce and why? Lab 9- Mitosis microscopic slides	Lab Exam 2 on 10/19 (All labs & lab content up to this date) Weekly lab report	C: 6-7 G: a-c
10/25 & 10/26	10: Meiosis and Sexual Reproduction	In Class: Mitosis vs meiosis What is meiosis? Lab 10- Forensics lab 1 (fingerprints, hair, fibers, & handwriting)	Weekly lab report	C: 6-7 G: a-c
11/01 & 11/02 11/02 65% Point, Last day for students to withdraw without academic penalty	11: Mendelian Patterns of Inheritance 12: Molecular Biology of the Gene	In Class: Article Review Projects Lab 11- Forensics lab 2 (bones, blood, blood typing, & other)	Article Review Projects Weekly lab report	C: 8-9 G: a, c
11/08 & 11/09	Continuing work on Mendelian genetics problems 13: Regulation of Gene Expression	In Class: Article Review Projects Genetics Gene expression Lab 12- DNA & Genetics lab Article Review Projects	Article Review Projects Review for Lab Exam 3 Weekly lab report	C:8-9 G:a-c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
11/15 & 11/16	Article Review Projects 14: Biotechnology and Genomics 15: Darwin and Evolution	In Class: Article Review Projects Biotechnology Lab13 -Microbiology lab DNA, & Biotechnology	Study for lab Exam 3 and work on your article review projects Article Review Projects Weekly lab report	C: 9-11 G: a-c
11/22 & 11/23 11/20-11/24 Thanksgiving Holiday-No classes this week	n/a	n/a	n/a	n/a
11/29 & 11/30	16: How Populations Evolve 17: Speciation and Macroevolution	In Class: Darwin & the theory of evolution Speciation Darwin and the theory of evolution Review for Final Lab Exam	Lab Exam 3 on 11/30 (All labs & lab content up to this date) Article Review Projects Weekly lab report All lab work must be completed and turned in by 11/30, no credit will be given after this date.	C: 9-11 G: a-c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
12/06 & 12/07 Last week of class	17: Speciation and Macroevolution 18: Origin and the History of Life Alternatives to the Theory of Evolution Make-up Lab Exam Day	In Class: Speciation Darwin and the theory of evolution Student work on presentations Article Review Projects Review for Final Lab Exam	Article Review Projects Student work on presentations All Article Review Projects must be completed by 12/07, no credit will be given after this date.	C: 1-11 G: a-c
12/12 Final Exams Official Final Exam Day	Final Lab Exam	In Class: Final Lab Exam -all labs & lab material covered in course	n/a	C: 1-11 G: a-c

MAJOR COURSE COMPETENCIES

1. Lab Safety
2. Microscope use and microscopic observation
3. Organization and Chemical Basis of Life
4. Cell Structure and Function
5. Metabolism
6. Cell Division
7. Protein Synthesis
8. Central Dogma of Biology
9. Genetics
10. Biotechnology
11. Evolutionary concepts

GENERAL CORE EDUCATIONAL COMPETENCIES (G)

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.

BELOW:

GUIDELINES & RUBRIC FOR RESEARCH ARTICLE REVIEW

Guidelines:

Students will read an article presented to them by the instructor. Students must write a summary about the article and the research conducted in the study. Students must be able to (write in their own words) explain the research findings and tell what the article entailed. The summary should be at least one full page, double spaced (minimum), with the appropriate work cited (if necessary.) Students should explain the research content, the study itself (what the researchers did), the results (data) and conclusion. Students are required to discuss this research article with the class. A printed copy of the summary must be attached to the article and it must be submitted to the instructor on the day the open discussions are due. This project may be an individual or group project. The in-class discussion should not be more than 10 minutes. Students should engage the audience in the research and encourage questions and discussion. The articles will be an array of topics selected by the instructor. The topics will be related to our studies.

Research Article Assignment/Summary Evaluation

Research Article Topic:

Student:

RUBRIC

Students must adhere to rubric for full credit

Section/Points Possible	Criteria	Comments	Points Earned
Focus, understanding, and connection 35	All material clearly related to the article research topic. Strong organization and integration of material within subtopics. Strong transitions linking subtopics, and main topic. The students understood the topic and the research and relayed this in the text.		
Communication and delivery 25	The research was explained to the instructor & audience and details were provided. The student(s) engaged and applied critical thinking.		
Grammar and Mechanics	The research summary (minimum 1 page)		

Section/Points Possible	Criteria	Comments	Points Earned
10	was provided to the instructor in printed form and was free of grammatical errors, spelling and punctuation. The article was also attached to the research summary.		
APA Style and Communication 10	No errors in APA style. Scholarly style. Writing is flowing and easy to follow. See checklist below.		
Citation and References & a copy was given to the instructor on the date due 20	All references and citations were correctly written and present. A hard copy of the work was given to the instructor the date due or prior to this date.		

APA **MAJOR** Errors:

- APA Reference Errors (ABC order, 1:1 reference/citation)
- APA Punctuation Errors
- APA in-text citation errors (incorrect author, year, *et al.* usage)
- Title page (header, spacing, content, etc.)
- APA page numbering
- APA verb problems (verb-subject-article agreement)
- Pronoun errors (which, that, who, whom)
- Formatting errors (line, letter, word-spacing, pagination, indentations)
- Use of abbreviations or numerals to begin paragraphs
- Undefined abbreviations
- Unprofessional writing tone
- Lack of empirical evidence for points made
- Other:

APA Minor Errors:

- Wrong font, font size, font color
- Inappropriate use of secondary sources
- Excessive abbreviations
- Occasional problems with hanging indent
- Using ampersand in text
- Other:

