

**Research and Medicine**

Jefferson High School

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**Course Description:**

Welcome to Research and Medicine! This class is designed for students who wish to explore biotechnology and its impact on our everyday lives. Biotechnology is the use of living organisms to solve problems or make useful products. This course will ask students to read and understand scientific literature and have a strong understanding of biology.

The course will cover historical and current research in the fields of Genome Science, Immunology, Infectious Diseases and Human Pathology. We will have guest speakers share insight of their particular field, while also attending medical and health occupation field trips. This is an HSBT requirement.

**Materials Needed**

Three Ring Binder

Writing utensils

**Resources**

**Google Classroom**: Each class is given a code and the course calendar with important due dates, along with course documents and information can be found here for support, review, and current class news.

**Assessment and Grading:**

A student’s grade is based on a point system. Assignments with higher point values will influence the final grade more than assignments with lower point values. To help organize student work, the categories below will be used. Each category has an approximate percentage toward a student’s overall grade.

* **~60% Topic Assessments** (These include, but are not limited to, essays, posters. presentations, tests, quizzes, labs, and extended response questions)
* **~30%Formative Assessments** (These include, but are not limited to, warmups, in-class assignments, quizzes, personal responses, and homework),
* **~10% Binders**

Binders will be a very important part of the class this semester. Your binder will serve as the place to take notes, complete warm-ups and store all assignments and handouts. Every assignment and handout will be numbered on the top right hand side of each paper and placed in a three ring binder.

Binders will be collected at the end of the semester for a grade. The grade will be calculated based on each handout and assignment being numbered, in proper order, and properly finished. Any unfinished or improperly completed assignments will decrease the binder grade. Answers for all assignments must be in complete sentences. Math worksheets and answers will be the only exception to this rule.

\*Quizzes are given with and without notice based on relevant coursework.

### \*Writing is an essential skill that is needed in all disciplines. For this reason, every assignment will be graded on the quality of writing along with the content of the assignment. 10% of the total points for each assignment will be associated with the quality of writing: proper conventions, punctuation, capitalization, and spelling.

**Grade Scale:**

A=90-100%

B=80-89%

C=70-79%

F=69% or lower

\*final grades below C are not considered passing as marks below this are not accepted by colleges/universities.

**Plagiarism**: It is expected that all work submitted reflects **your own** thinking or is properly referenced. It is unethical to use someone’s ideas (whether a friend’s or a published author’s) and receive credit for them. Deliberate plagiarism will result in a mark of zero.

**Behavior Expectations:**

As a learning community, we want to make sure that all students have the ability to be successful. As a result, the following behavior norms will be heavily reinforced throughout the school year:

* Respect Air Time.
* Stay Focused.
* Respectfully Help Others Stay Focused.
* Own it, Fix it, and Move on.
* Use respectful language.
* All students are required to actively engage in the learning environment of the class. This means students should be asking questions, completing assignments, and working efficiently in groups.
* No food in the class EVER.
* Water bottles with lids that seal can be used on days without labs.
* No headphones visible or audible unless otherwise stated.

**Attendance and Lateness**

You are expected to arrive to class on time and ready to participate every day. In the event you are late, quietly enter the classroom. Students are to begin working upon entering the class. Excessive lateness will be documented and begin a collaborative disciplinary process.

**Absence**

When you are absent visit google classroom to see what assignments were missed. You are responsible for submitting any missed assignments in a timely manner.

**Electronic Devices**

Cellphone and electronic devices are permitted for educational use only. Using devices for non-academic reasons and charging phones in the classroom are never permitted.

**Late Work Policy:**  No assignments will be accepted late. The only expectations will be for topic assessments which will be accepted but will incur a 10 point grade reduction for every day the assignments is late. Students can also ask for an extension on assignments, if necessary. This option has to be completed via email and only used for emergency situations.

### Rewards:

Academic champions will be recognized as the winners of review games.  An academic champion will be awarded one or all of the following privileges for one week: use of headphones and/or work in a group of two during independent work time.  After being awarded the academic champion title, champions are awarded a trophy that is to be displayed for the week.  For an academic champion to take advantage of his/her privileges, they must display the trophy on their desk.  An academic champion's privileges will last for one week

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| **Course Content** | |
| * Introduction to bioethics * Epidemiology and Infectious diseases * Vaccines * Genetic disorders and technology | * *The Immortal Life of Henrietta Lacks*: Medical apartheid, human subjects, bioethics * Laboratory and clinical applications of biotechnology |

**Projects:**

Throughout the year, students will be assigned projects such as papers, posters and presentations. Each project will be completed in the classroom and include an exit criteria. The exit criteria will give detailed instructions on what the students needs to complete in order to earn credit. If the student provides an incomplete project or plagiarizes, **no grade will be given**. Students must continue to finish these projects in a timely manner. While much of the project work is completed in the classroom, students are expected to dedicate out-of-class time to studying, writing, researching, and completing projects. Students who neglect to finish projects during assigned dates will need to finish this work on their own time.

**Support/Extra Help:**

I love and believe that science is a wonderful fascinating way to look at the world. Scientific concepts are not always easy and can include difficult vocabulary that we don’t often use in our everyday lives. While we strive to meet the learning needs of every student some students will find they need extra support along the way. If/when this happens we’ll work together to find the resources and support so that each student can find their stride.

**The best way to ensure I am available to help is to set up a scheduled time to meet. I am here early in morning, before school, and usually stay late after school. Please set up an appointment via email so I can provide you with uninterrupted help**.

**Laboratory Investigations:**

Students will be participating in laboratory investigations. These allow for further study of the topic and to enhance the processing of new information. It is important that student behavior is safe and cooperative during laboratory exercises to ensure success and safety for all. **Please see safety contract for additional safety information.**

**Differentiated Classroom Practice (ELL, TAG, SpED, other):**

I subscribe to the belief that the best learning is done with high expectations and strong support. Differentiation strategies include a wide variety of practice options, one-on-one supports during and outside of class, direct feedback on work, and activities tailored to pre-assessment results. We will use the following to make our class time engaging for everyone:

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| --- | --- | --- |
| Flexible Grouping / Group Work    Student Centered Curriculum    Tiered Assignments    Pre-instruction Assessment | Independent group Projects/Research    Open-ended Tasks    Questioning Techniques    Students as teachers/producers    Criteria Sheets | Learning Centers/Stations    Role Play Activities    Protocoled Classroom Discussion    Narrative Writing    Student Self Assessment/Rubrics |

**Research and Medicine 2016 Syllabus Contract**

Please Return This Paper To Mr. Napoli

I have read and understand the attached course description. I understand that:

* I need specified materials to succeed in this class,
* I need to attend class and complete classwork and homework to be successful,
* Being tardy can result in missing the warm-up and/or classwork assignment.
* All regulations outlined in the Jefferson student handbook will be enforced.
* Mr. Napoli is available for extra help and it is the student’s responsibility to schedule available time.

Student Name (print) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent or Guardian Name (print) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent or Guardian Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The best way to reach me is:

\_\_\_\_\_by e-mail \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_by phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_