

Medical Interventions 2015-2016

Mr. Weeks
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Room B-304

Course Description:

In the Medical Interventions course, students will investigate a variety of interventions involved in the prevention, diagnosis and treatment of disease as you follow the lives of a fictitious family. The course is a “How-To” manual for maintaining overall health and homeostasis in the body as students explore how to prevent and fight infection, how to screen and evaluate the code in human DNA, how to prevent, diagnose, and treat cancer, and how to prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Each family case scenario introduces multiple types of interventions and reinforces concepts learned in the previous two courses, as well as presenting new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders. These interventions are showcased across the generations of the family and provide a look at the past, present and future of biomedical science. Lifestyle choices and preventive measures are emphasized throughout the course as well as the important roles scientific thinking and engineering design play in the development of interventions of the future.

COURSE OUTLINE:

Unit One: How to Fight Infection

- 1.1: The Mystery Infection
- 1.2: Antibiotic Treatment-
- 1.3: Aftermath: Hearing Loss
- 1.4: Vaccination

Unit Two: How to Screen Your Genes

- 2.1: Genetic Testing and Screening
- 2.2: Our Genetic Future

Unit Three: How to Conquer Cancer

- 3.1: Detecting Cancer
- 3.2: Reducing Cancer Risk
- 3.3: Treating Cancer
- 3.4: Building a Better Cancer Treatment

Unit Four: How to Prevail When Organs Fail

- 4.1: Manufacturing Human Proteins
- 4.2: Organ Failure
- 4.3: Transplant
- 4.4: Building a Better Body

ACADEMIC INTEGRITY

Cheating, copying, and plagiarism are all forms of academic dishonesty. Cheating is any form of obtaining information unfairly and without authorization for a test, quiz or other graded assignment. Copying is the use of another’s work with the understanding of a teacher that it is one’s own. Unless a teacher has expressly stated in the assignment instructions that the task is one that is collaborative, it should be assumed that the assessment is an individual endeavor. Cheating, whether verbal, written, or computer generated, can involve, but is not limited to:

- Copying on tests
- Copying of homework
- Plagiarism of published works (including Internet resources)
- Multiple submission of work previously turned in for a grade by another student.
- Giving answers to a test or homework or Discussion of test materials with others
- Using electronic devices to communicate any contents of homework, tests or quizzes

Using electronic devices without teacher permission to acquire information during class hours

Classroom/Lab Behavior Expectations

1. **Respect-** This includes yourself, your fellow students, and your teacher. Raise your hand before speaking, no talking while another individual is talking, and respect each other's personal space. I will respect you as a student and expect you to respect me as a teacher
2. **Be on time and arrive prepared to class-** You should be in your assigned seat, working quietly on the daily drill when class begins. No loitering in the doorway or halls. Be ready with your notebook and any assignments. In addition, be prepared to learn and apply yourself. Turn in your assignments on time as work is NOT ACCEPTED LATE!
3. **Dress appropriately-** CLOSED TOED SHOES AT ALL TIMES IN THE LAB! FOLLOW THE DRESS CODE! You won't be allowed to participate in lab without the proper attire and will receive a zero for the day.
4. **Stay seated during class-** Unless you are given permission to get out of your seat or are working on a group activity, you should remain seated properly in your assigned seat. Raise your plan book or sign language if you need to go to bathroom. I will not let you go to the bathroom during the first 15 and last 15 minutes of class unless it is an extreme emergency.
5. **No eating, swearing, cheating, or playing with electronic devices-** This one should explain itself. All of these activities are considered detrimental to the learning environment and will not be tolerated. School rules indicate that all phones, MP3 players, etc. should be turned off and put away during class time. NO CHEATING WILL BE TOLERATED! You will receive a zero!

Grading:

Each assignment will be given points based on the amount of work and difficulty of the assignment. Categories of grades include classwork, homework, lab participation, tests, quizzes, and notebook. Tests and lab assignments are a big part of the grade in this course. If you are not dressed properly for labs, you do not participate and you receive a 0. Work MUST be turned in on time!

Materials

- A notebook for only MI or a dedicated section of your notebook for MI
- Disinfecting Wipes
- Pens and Pencils
- Box of Gloves for Labs

I have read and understand the rules given in this introduction and agree to follow them.

Student Name (Print): _____

Student Signature: _____

Parent Name (Print): _____

Parent Signature: _____

Parent Email: _____ Parent Phone #: _____