



Medical Interventions

COURSE INSTRUCTORS

| Instructor | Email | Phone number |
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COURSE DESCRIPTION

In the Medical Interventions course, students will investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. A “How-To” manual for maintaining overall health and homeostasis in the body, the course will explore how to prevent and fight infection, how to screen and evaluate the code in our 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 will be exposed to the wide range of interventions related to Immunology, Surgery, Genetics, Pharmacology, Medical Devices, and Diagnostics. Each family case scenario will introduce multiple types of interventions and will reinforce concepts learned in the previous two courses, as well as present new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders. These interventions will be showcased across the generations of the family and will 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 role scientific thinking and engineering design play in the development of interventions of the future.

COURSE MODULES

UNIT ONE:

Students are introduced to the Smith family; the family we will focus on as we progress through this course. This unit deals with infection, and all of the issues surrounding the identification, treatment, and prevention of infections and infectious diseases.

UNIT TWO:

Students will learn how genetics plays a key role in health, with emphasis on genetic screening and the associated technologies, as well as reproductive therapy.

UNIT THREE:

Students are the horrifying world of cancer in this unit. Students will explore the techniques involved in detecting, treating and preventing cancer, including its impact on the Smith family.

UNIT FOUR:

Students are introduced to various medical intervention topics including custom proteins, organ transplants, and artificial body components.

STUDENT EXPECTATIONS

1. Students are expected to check Canvas and email at least daily.
2. Students are expected to attend course sessions.
3. Students are expected to reach out to instructors when they have questions.

TECHNOLOGY

1. Students are expected to have working Chromebooks.
2. All communication will come through email and Canvas.
3. Supplemental Resources: CK-12 flexbook

LATE POLICY & MAKE-UP WORK

Students are expected to submit all work on time and meet all provided deadlines. If you are struggling to meet this expectation, please reach out to the course instructor in a timely manner.

ACADEMIC INTEGRITY

It is essential for students to complete their own work at all times. Cheating means using the work of another person as their own, copying information or answers from another student, plagiarizing, allowing another student to copy work, excessive collaboration on an assignment meant to be done individually, or sharing test/quiz questions/answers with students who have not yet taken the test/quiz. If a student is caught violating these guidelines, he/she will receive disciplinary action according to school policy.

