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Why do you think it's important for aspiring health care professionals to learn pharmacology?

In order to really understand the treatment of disease, you have to understand the basics of how a drug acts in the body. When a clinician is choosing a treatment for a patient, they are considering many pharmacological parameters such as the properties of the drug, the dose of the drug to give, how often the drug should be given, the age, weight, gender, and race of the patient, the disease itself, and the stage of disease. Eventually, without even knowing it, the clinician is processing all this information and all of these basic concepts of pharmacology in order to decide on the most efficient and beneficial treatment for the patient. To get to this point, and to be able to treat and prevent various conditions, knowing the fundamental concepts of pharmacology is vital.

What do you want students to take away from this course?

Pharmacology does require a knowledge of many other subjects such as anatomy, physiology and biochemistry, so it can be difficult to try and bring all of these together in order to understand pharmacology as a single subject. But although this is challenging this is also what makes pharmacology exciting, being able to bring all of this information together to truly understand what happens when a drug enters the body and what exactly the drug does to all the different systems within the body.

It is often thought that pharmacology is just memorizing drug names and chemical pathways, but when you dig deeper you see that this subject is built on top of a few simple concepts. We've put together this course to help the student learn those concepts, to show how they apply on a cellular level and then also how they apply at the patient level, to the treatment and prevention of disease. In this course, we always relate these fundamental principles back to the patient, so the student can see the bigger picture and how the basic concepts are applied in the practice of medicine.

Reference

[Not Necessarily Rocket Science: A Beginner's Guide to Life in the Space Age \(Women in Science Gifts, NASA Gifts, Aerospace Industry, Mars\)](#)

[Fundamentals of Chemical Reaction Engineering \(Dover Civil and Mechanical Engineering\)](#)