

# NURSING PREREQUISITES

The cardiovascular system consists of the heart, blood, and blood vessels. A healthy understanding of the structure of the cardiovascular system is vital for every nurse regardless of their place of work, as nearly every nursing intervention has the potential to impact this system.

Nursing prerequisites are challenging to many candidates of nursing schools. An understanding of molecular and cell biology, as well as chemistry, are only some of the requirements.

there isn't one exact thing that makes nursing school so hard. Here are a few things we can all agree contributes to the challenge of nursing school:

- Nonstop assignments
- Managing one's time
- Finding a balance between personal and student lifestyles
- Staying motivated
- Sleep deprivation
- Staying active
- Clinical rounds
- The stress of the NCLEX
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in nursing school you should understand early on that memorisation is not the best practice when it comes to effective study tools. Nursing school is designed to prepare you for real-world experiences and the best practice care for your patients. This preparation includes assessing, analysing, interpretation, and application. It is not just holding space in your memory bank.

Effective nursing school study tips should include continuous practice in four specific areas:

- Time management
- Strategic note taking
- Reading material before and after lectures
- Teach back method
- Study practice questions
- Accountability/Study partner(s)

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## Anatomy

## Molecular and Cell Biology

### Chemistry

Chemistry is the branch of science that focuses on the study of matter, its composition and properties, and the reactions that occur to form new compounds. Owing to its complexity, this branch of science is subdivided into biochemistry, and organic, inorganic, analytical, and physical chemistry. The idea that matter is made up of individual and indivisible parts (atomos) originated in ancient Greece and is attributed to the polymath Democritus. This idea has continued to evolve throughout history. The discovery of the fundamental particles of an atom, namely protons, neutrons, and electrons, was a prominent landmark. Recently, the planetary model of the atom has been replaced by the atomic orbital theory, which better describes electrons and chemical bonds.

The student should be introduced to atoms and its components, characteristics of chemical bonds, stereochemistry, electronegativity, acid-base reactions, organic chemistry, and chemistry topics related to the medical field, including biochemistry and pharmacology. For optimal comprehension, the student is expected to have a high-school-level understanding of chemistry and physics.

Chemistry is a fundamental prerequisite to understanding the concepts of biochemistry, which is a basic science in medical education integrated with molecular and cell biology. **Pharmacology** is the branch of chemistry that utilises the concepts of chemistry for the development of drugs with better safety profiles.

### Microbiology

Infectious diseases have burdened humanity for millennia. Concepts of contagion and its prevention slowly developed in different cultures over centuries. In the 19th century, Louis Pasteur introduced the germ theory of disease, which describes the relationship between microorganisms and illnesses. Microbiology is the branch of biology that focuses on the study of these microorganisms and their relationship to disease processes by describing their characteristics (e.g., species, structure, virulence factors, etc.).

Student will be introduced to the most important concepts regarding bacteria, viruses, fungi, parasites, and prions, including their classification, characteristics, and important clinical details.

For optimal comprehension, the student will be required to have preliminary knowledge of molecular and cellular biology, biochemistry, histology, and physiology. Familiarity with the biology of prokaryotic cells is strongly encouraged.

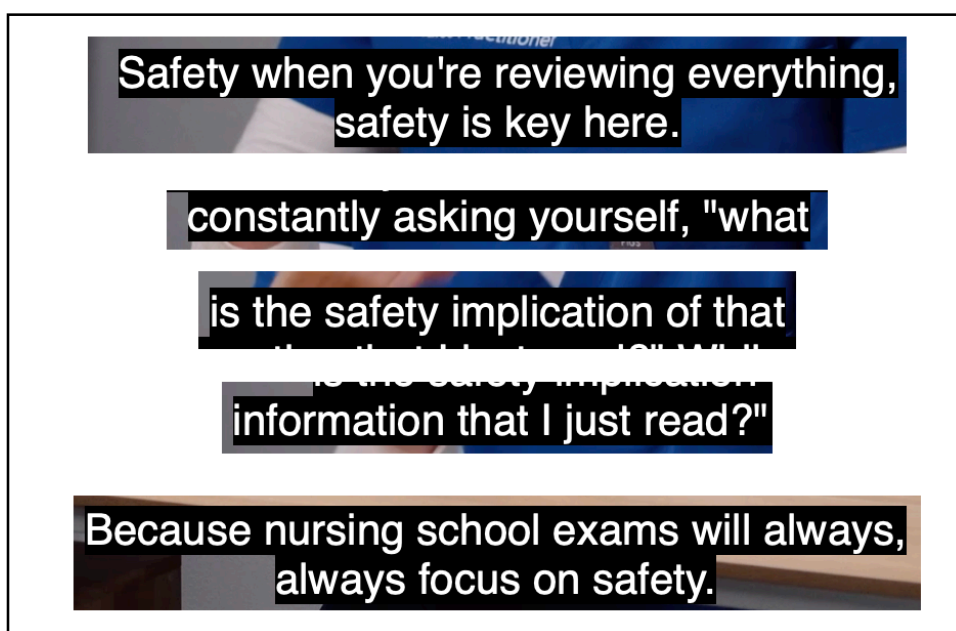
## Psychology and Sociology

Psychology is the branch of health science dedicated to the study of the functions of the human mind, with a special focus on factors that influence behaviour. Sociology is the science that focuses on the study of social relationships and the human psyche. This course provides a path starting from the elements that make up the human mind and the conception of self, and ending with an explanation of how that self is placed within a societal structure.

The student should be introduced to how humans sense and understand their environment. Moreover, factors that influence behaviour as well as the concept of self-identity, social interactions, social thinking, and social structures will be discussed. For optimal comprehension, the student is required to have a good grasp of the physiology of the neurosensory organs, endocrine organs, and sleep, and a thorough understanding of the pharmacology of addictive substances.

Importance of the subject for the medical career and field in general: Under the bio-psycho-social model of disease, physicians can positively affect the psychological health of their patients, at the very least, by providing the emotional support needed to overcome the psychological stress of being burdened with a disease. Furthermore, a competent physician must understand that all individuals play important roles in societal structures that they are a part of, and that disease processes can hinder their ability to adequately respond to the obligations inherent to their role. A working knowledge of psychology and sociology enables physicians to address these aspects and maximise the effectiveness of interventions.

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anything you do know,

you will immediately

forget when you are in the clinical setting  
because it is just terrifying

at first.

You will slowly - good news - you will slowly  
get used to it.

You will start to have some things happen on  
autopilot and you will

incorporate things into your actual long  
term memory when you do them over and over

again. But no one expects that to happen  
while you are actually in

school, to be totally honest.

So if you are beating yourself up thinking  
that you are not ready to be in

clinical and this was all a mistake, and  
it's scary to interact with patients,

that's okay. That is totally normal.

You just need a lot of practicing

to get you there,

and that is literally

what clinical is for.

but you need to have a

willingness to learn.