

# **BSc. Cardiopulmonary Perfusion Care Technology:**

## **Overview:**

The PERFUSIONIST ( A candidate completing the B. Sc Cardio Pulmonary Perfusion care Technology ) operates the heart-lung machine.

This machine takes over the function of your heart and lungs. The functions include removing carbon dioxide , adding oxygen and then pumping this refreshed oxygenated blood back into the body.

The perfusionist manages the physiological and metabolic demands of the patient while the cardiac surgeon operates on the heart.

It is also the perfusionist's responsibility to deliver cardioplegia that arrests the heart and deliver other drugs that support the heart function.

A perfusionist generally spends most of his or her time in the operation theatre for cardiac cases, but the responsibilities extending to the areas such as cardiovascular intensive care unit and catheterization laboratory.

## **Scope:**

The scope for a perfusionist is promising and diverse. Here are some key aspects:

1.Clinical Settings: Perfusionists are primarily employed in hospitals, particularly in cardiovascular surgery departments

,where they contribute to various cardiac procedures, including bypass surgeries and heart transplants.

2.Research and Development: Opportunities exist for perfusionists to engage in research and development in the field of cardiovascular technology. This could involve improving existing perfusion techniques or contributing to the development of new technologies.

3. Teaching and Education: Experienced perfusionists may choose to venture into academia, becoming educators in perfusion technology programs. They can train the next generation of perfusionists, sharing their expertise and knowledge.

4. Medical Device Industry: Some perfusionists find roles in the medical device industry, working with companies that manufacture perfusion equipment or related technologies. This involves product development, testing, and support.

5. Traveling Perfusion: Some perfusionists opt for a career as traveling perfusionists, working on a contractual basis in different healthcare facilities. This can provide a variety of experiences and exposure to diverse medical practices.

6. Continuing Education and Specialization: Perfusionists can pursue further education and specialization to enhance their skills. Specializations may include pediatric perfusion, adult perfusion, or circulatory support (ECMO), opening up more specific career paths.

7. Given the critical role perfusionists play in cardiovascular surgeries, the demand for skilled professionals in this field is expected to remain strong, offering a stable and rewarding career with opportunities for growth and specialization.

## **ELIGIBILITY:**

To be eligible for admission to the Bachelor of Science In Cardiopulmonary Perfusion Care Technology candidates must meet the following criteria:

Completion of Higher Secondary Certificate (HSC) or equivalent with a Science Group , minimum of 45% marks in the qualifying examination.

## **DURATION:**

3 year + 1 year internship

**CURRICULUM :**

**Year 1**

**Paper 1 : Anatomy & Physiology**

**Paper 2 : Biochemistry & Pathology**

**Year 2**

**Paper 1 : Pharmacology, Pathology & Clinical Microbiology**

**Paper 2 : Principles of Perfusion Technology part 1**

**Year 3 :**

**Paper 1 : Introduction to surgery & CSSD**

**Paper 2 : Cardiopulmonary bypass & Perfusion Technology**

**Paper 3 : Cardiopulmonary bypass & Complications , Sterile techniques & surgical asepsis maintenance**