

Noorul Islam Centre for Higher Education

(Deemed to be University u/s 3 of the UGC Act 1956)

Kumaracoil, Thuckalay, Kanyakumari District - 629 180

Accredited by NAAC with 'A' Grade

PT26 BSc Perfusion Technology



Student Performance and Learning Outcomes

PT26 BSc Perfusion Technology

| Programme Outcome(PO) | |
|-----------------------|---|
| PO-A | Students are familiar with basic subjects of Perfusion technology. |
| PO-B | Knowledge on the inter disciplinary subjects make them excel in the programme. |
| PO-C | Performs the health care procedures based on their theoretical knowledge. |
| PO-D | Based on the theoretical knowledge obtained students will be able to identify the signs and symptoms of diseases and new solutions can be formulated. |
| PO-E | Knowledge on perfusion technology will help them to diagnose the critical complications and identify solutions to them. |
| PO-F | Provide health education to the society in mitigating health problems through healthy lifestyle. |
| PO-G | Giving awareness to the society regarding the prevention of health issues and the existing technologies to identify the cardiac problems and the treatment. |
| PO-H | Group assignments and projects will make them to understand and cooperate with co-workers. |
| PO-I | Students will be able to develop skills of effective communication and principles of team work. |
| PO-J | Clinical experience enables them to understand their roles and responsibilities as professionals. |
| PO-K | Designing new methods in care of patients through research in concern with the social ethics. |
| PO-L | Innovating cost effective technology which can be affordable for all sectors of the society. |
| PO-M | Motivating the students to ensure health care services to society by upgrading their knowledge. |

| PROGRAMME SPECIFIC OUTCOME(PSO) | |
|---------------------------------|--|
| PSO-1 | This programme provides well trained professionals for perfusion that forms an integral part of the invasive cardiology department. |
| PSO-2 | On successful completion of the course the student will acquire basic knowledge about the various technicalities involved in the process and how to deal with it |
| PSO-3 | The course aims to develop an understanding of the various arrangements of the cardiovascular system along with its invasive and non invasive methods to deal with the particular situation |
| PSO-4 | After the successful completion of the course the students are aimed to have technical knowledge to deal with complications dealt in the procedure and basic knowledge on the prevailing act |
| PSO-5 | This programme could provide well trained professionals for perfusion technology to meet with well trained physicians in the world. |

| Sl.No | Subject Code | Subject Name |
|--------------------|--------------|---|
| SEMESTER II | | |
| 1. | BS2605 | PATHOLOGY |
| 2. | BS2606 | MICROBIOLOGY |
| 3. | BS2607 | PHARMACOLOGY |
| 4. | BS2608 | PSYCHOLOGY |
| 5. | BS2609 | INTRODUCTION TO COMPUTERS |
| 6. | BS2674 | PATHOLOGY LAB |
| 7. | BS2675 | MICROBIOLOGY LAB |
| 8. | BS2676 | PHARMACOLOGY LAB |
| SEMESTER IV | | |
| 9. | BS26S5 | PATIENT CARE AND BASIC NURSING |
| 10. | BS26S6 | BIostatISTICS AND RESEARCH METHODOLOGY |
| 11. | BS26S7 | CONSTITUTION OF INDIA |
| 12. | BS26S8 | BASICS OF MEDICAL DISORDER |
| 13. | PT2602 | BASICS OF PUMPS, OXYGENATORS, ALTERS AND BLOOD COMPONENTS |
| 14. | BS2674 | PATIENT CARE AND BASIC NURSING LAB |
| 15. | BS2673 | BASICS OF MEDICAL DISORDER LAB |
| 16. | PT2672 | BASICS OF PUMPS, OXYGENATORS, ALTERS AND BLOOD COMPONENTS LAB |

| Pathology – BS2605 | |
|--------------------|---|
| CO1 | Enable the students to understand the scope of pathology |
| CO2 | Helps to know about the basic terminology of hematological disorder |
| CO3 | Enhances the students to understand basic knowledge of hematological techniques |
| CO4 | Students will acquire knowledge about the transfusion medicine |
| CO5 | Students are enable to understand the concepts of clinical pathology |

| Microbiology – BS2606 | |
|-----------------------|---|
| CO1 | Understand the taxonomic classification of microorganisms and various sterilization methods |
| CO2 | Understand and identify common bacterial infectious agents and the disease that they cause |
| CO3 | Learn basic technical terminology of bacterial, mycobacterial and parasitology |
| CO4 | Know the morphology and diagnostics methods for various fungal infections |
| CO5 | Understand the interaction between viruses and its host and know the preventive measures of viruses |

| Pharmacology – BS2607 | |
|-----------------------|--|
| CO1 | Students are able to understand regarding the general pharmacology including pharmacokinetics and pharmacodynamics of adrenalgic drugs |
| CO2 | Students will be able to enlist skeletal muscle relaxants, ionotropic drugs, antihypertensives and diuretics |
| CO3 | Students will be able to understand regarding general anesthetics, antiepileptics, opiodsanalgestics and NSAIDS |
| CO4 | Students will be able to enhance their knowledge on chemotherapeutic drugs |
| CO5 | Students will be able to list out antibiotics, antifungal, antiviral and hormonal drugs |

| Psychology – BS2608 | |
|---------------------|---|
| CO1 | The students get a clear picture about the basic of psychology, scope, branches and history |
| CO2 | Students will be able to identify psychological disorders like anxiety, panic, phobia |
| CO3 | Students learn about stress and how to manage it |
| CO4 | Students learn about the process of learning in psychological perspective |
| CO5 | The students learn about therapeutic techniques and concept of counseling and relaxation |

| Introduction to computers – BS2609 | |
|------------------------------------|---|
| CO1 | Students will familiar with their components of computer and operating system |
| CO2 | Students will become familiar with different generation, types and applications of computer |
| CO3 | Student will aquire knowledge on memory and mother board |
| CO4 | Upon successful completion with this course students will gain knowledge on internet, computer and operating system |
| CO5 | Students will understand about softwares and hardwares |

| Pathology Lab – BS2674 | |
|------------------------|--|
| CO1 | Enable the student for understanding the concerned techniques for blood collection |
| CO2 | Students will acquire knowledge about hematological techniques |
| CO3 | Students will be enables to understand the indications and procedure involved in blood transfusion |
| CO4 | Student will be able to gain basic knowledge of morphology of blood cells |
| CO5 | Students will be enhanced with the basic knowledge of collection and examination of CSF |

| Microbiology Lab – BS2675 | |
|---------------------------|---|
| CO1 | Develop basic skill in aseptic techniques and know the parts of the microscope and its principles |
| CO2 | Understand the different methods of staining techniques |
| CO3 | Understand nutritional requirements of bacteria and different cultivation techniques |
| CO4 | To determine the concepts of various antigen antibody reactions |
| CO5 | To determine the effect of antibiotics on microbial growth |

| Pharmacology Lab – BS2676 | |
|---------------------------|--|
| CO1 | Students will be able to understand the rules of drug administration |
| CO2 | Students will be able to know the dosages of various drugs |
| CO3 | Students will be able to understand fixed dose combinations |
| CO4 | Students will be able to understand regarding the drug stations of various drugs |
| CO5 | Students will be able to gain knowledge regarding different instruments and devices used for the administration of drugs |

| Patient care and Basic nursing – BS26S5 | |
|---|---|
| CO1 | It deals with communication and documentation |
| CO2 | It deals with universal precautions and infection control in hospital setting |
| CO3 | It deals with medication administration and transport of patients |
| CO4 | It deals with bedside care and monitoring of patients |
| CO5 | It deals with wound care and basic life support |

| Biostatistics and Research Methodology – BS26S6 | |
|---|---|
| CO1 | Deals with basic knowledge of biostatistics and its application in medicine |
| CO2 | Deals with various types of data presentation and data summarization |
| CO3 | Deals with data analysis and sampling technique |
| CO4 | Deals with various study designs |
| CO5 | Deals with application of various study designs in medical research |

| Constitution of India – BS26S7 | |
|--------------------------------|---|
| CO1 | Students will be able to know the history of making of Indian constitution |
| CO2 | Students will be able to know about the basic of democracy in constitution |
| CO3 | Students will be able to know about their fundamental rights and duties |
| CO4 | Students will be able to know the functions of different organizations under constitution |

| | |
|-----|---|
| CO5 | Students will be able to know the ways of amending the constitution |
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| Basics of Medical Disorder – BS26S8 | |
|-------------------------------------|--|
| CO1 | Upon successful completion of this course, students will be able to study various medical conditions and disorders |
| CO2 | Students will understand various clinical symptoms, signs of various general medical disorders |
| CO3 | Students will be able to diagnose disease condition by analyzing clinical manifestation |
| CO4 | Students will be able to differentiate various medical disorders into corresponding systems of human body involved |
| CO5 | Students will be able to study various treatment plans and drugs for all these medical disorders |

| Basics of pumps, oxygenators, alters and blood components – PT2602 | |
|--|---|
| CO1 | Students learn about the various oxygenators from the old to new regarding their designs and working mechanisms |
| CO2 | Students learn about the various types of blood pumps used in CPB in order to take over the functions of heart during bypass |
| CO3 | Students learn about the idea behind the use of filters and tubings while performing CPB |
| CO4 | Students learn about the various types of blood component and their handling |
| CO5 | Students learn about the various hematologic disorders as a challenging situation while performing CPB regarding the management of those disorders during CPB |

| Patient care and Basic Nursing Lab – BS2674 | |
|---|---|
| CO1 | Will be able to know regarding ECG monitoring of patients |
| CO2 | Will be able to know the insertion of intravenous catheters and infusion of medications |
| CO3 | Will be able to know regarding oxygen therapy, suctioning and care of artificial air ways |
| CO4 | It deals with vital signs of patients |
| CO5 | Will be able to deal with first aid and basic life support |

| Basics of Medical Disorder Lab – BS2673 | |
|---|--|
| CO1 | To analyze normal X-ray and determine the variations in various disease conditions |
| CO2 | To evaluate blood investigation reports |
| CO3 | To understand various drug therapies in microbial infection cases |
| CO4 | To analyze history physical examination and blood reports to reach a proper diagnosis |
| CO5 | To understand various instruments and devices associated with diagnostic criteria to check the vital signs |

| Basics of pumps, oxygenators, alters and blood components Lab – PT2672 | |
|--|---|
| CO1 | Students learn about the various oxygenators from the old to new regarding their designs and working mechanisms |
| CO2 | Students learn about the various types of blood pumps used in CPB in order to take over the functions of heart during bypass |
| CO3 | Students learn about the idea behind the use of filters and tubings while performing CPB |
| CO4 | Students learn about the various types of blood component and their handling |
| CO5 | Students learn about the various hematologic disorders as a challenging situation while performing CPB regarding the management of those disorders during CPB |