

**KRISHNA INSTITUTE OF MEDICAL SCIENCES  
“DEEMED TO BE UNIVERSITY”, KARAD.  
KRISHNA COLLEGE OF PHYSIOTHERAPY**

**POST GRADUATE - MASTER OF PHYSIOTHERAPY (02 YEARS)  
M.P.Th IN CARDIO-PULMONARY SCIENCES  
PROGRAMME CODE: 3203**

**AIM:**

The Master of Physiotherapy (specialty) Programme is directed towards rendering competency in knowledge and skills related to advance physiotherapeutic skills especially related to specialty Clinical fields to enhance professional Physiotherapy Practice, Education and Research, in line with global standards.

**COURSE OUTLINE:**

The Master's degree in Physiotherapy is a two year full time programme consisting of classroom teaching, self-academic activities and clinical postings, with self-directed evidence based practice. In the first year theoretical basis of physiotherapy is refreshed along with research methodology, biostatistics & teaching technology. The students are rotated in all areas of clinical expertise including their specialty during this period. They are required to choose their study for dissertation and submit a synopsis. During the second year the students will be posted in their area of specialty. They are required to complete and submit their dissertation. The learning program includes seminars, journal reviews, case presentations, case discussions and classroom teaching. Some of the clinical postings may be provided at other reputed centers in the country in order to offer a wider spectrum of experience. The students are encouraged to attend conferences, workshops to enhance their knowledge during the course of study. University examinations are held at the end of first year and at the end of second year.

**COURSE OUTCOME:**

This course promotes the development of skills, knowledge and attributes of a reflective, evidence-based practitioner with special attributes to enhance his / her career in a better way as per the society needs.

**ELIGIBILITY FOR ADMISSION:**

1. He/she has passed the Bachelor of Physiotherapy recognized by any Indian University with

pass marks (50%).

2. Admission to Master of Physiotherapy course shall be made as per the rules by the competent authority. Entrance test will be conducted by KIMSDU as per the rules by competent authority.

### **OBJECTIVES:**

At the completion of this course, the student should be -

1. Be able to do a physical therapy diagnosis using a frame work of ICF that is to identify the impairment of body structure, body function, environmental and personal factors and to address the activity limitations and participations restrictions and able to execute all routine physiotherapeutic procedures with clinical reasoning & evidence based practice.
2. Able to be a prominent member of the multidisciplinary team and treat all the conditions which need physiotherapeutic procedures.
3. Able to provide adequate knowledge about the treatment procedures and its benefit.
4. Able to transfer knowledge and skills to students as well as young professionals.
5. Able to perform independent physiotherapy assessment and treatment for patients.
6. To plan and implement need based physiotherapy interventions for all clinical conditions related to respective specialty in acute, chronic cases, critical care, independent practice including health promotion and prevention.
7. Able to undertake independent research in the field of physiotherapy.
8. Learn multidisciplinary practice skills.
9. Able to practice and assess patient independently.
10. Able to practice in his / her specialty area with advanced knowledge and skills.
11. Able to take up physiotherapy teaching assignments independently for undergraduate teaching programme.
12. Able to prepare project proposal with selected research design and interpret the evaluated outcome measures (using sound data processing techniques and statistical methods).

### **SPECIALTIES OFFERED:**

1. MPT in Musculoskeletal Sciences
2. MPT in Neurosciences
3. MPT in Cardio Pulmonary Sciences
4. MPT in Community Health
5. MPT in Pediatric Neurology

## **ASSESSMENT:**

Two exams will be conducted in theory and practical at the end of first and final academic years. The Attendance and progress report scrutinized and certified by the Head of the Department and Head of the Institution to be submitted to the university with the exam form for both first & second year examination.

## **YEAR WISE SUBJECTS:**

### **MPT - I YEAR**

1. Basic Sciences.
2. Basic Therapeutics.
3. Advanced Therapeutics - As per specialty (5 Specialties.)
4. Research Methodology & Biostatistics.

### **MPT – II YEAR SPECIALTIES: (2 SUBJECTS IN EACH SPECIALITY)**

1. General Physiotherapy - As per specialties (5 Specialties.)
  2. Advances in Physiotherapy - As per 5 Specialties.
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1. MPT in Musculoskeletal Sciences.
  2. MPT in Neurosciences.
  3. MPT in Cardio Pulmonary Sciences.
  4. MPT in Community Health.
  5. MPT in Pediatric Neurology.

## **3203 - M.P.Th IN CARDIO-PULMONARY SCIENCES**

### **M.P.Th - I Year**

1. **3203 - 11: BASIC SCIENCES**
2. **3203 - 12: BASIC THERAPEUTICS**
3. **3203 - 13: ADVANCED THERAPEUTICS IN CARDIO-PULMONARY SCIENCES**
4. **3203 - 14: BIOSTATISTICS AND RESEARCH METHODOLOGY**

### **M.P.Th - II Year**

1. **3203 - 21: GENERAL PHYSIOTHERAPY IN CARDIO-PULMONARY SCIENCES**
2. **3203 - 22: ADVANCES IN CARDIO-PULMONARY SCIENCES**

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**3203- M.P.TH IN CARDIOPULMONARY SCIENCES.**

**3203-11: BASIC SCIENCES.**

**SYLLABUS:**

| Sr. No | Content  | Teaching Hours    |                    | Must know | Desirable to know | Nice to know |
|--------|--|-------------------|--------------------|-----------|-------------------|--------------|
|        |  | Didactic (98 Hrs) | Practical (82 Hrs) |           |                   |              |
| 1.     | PRINCIPLES AND ETHICS:<br>a. Theoretical background of physiotherapy profession. | 10 Hrs            | -                  | MK        |                   |              |
|        | b. Professional sources in the community.  |                   |                    |           |                   |              |
|        | c. Principles and practice of physiotherapy in India.                            |                   |                    |           |                   |              |
|        | d. Ethical background of physiotherapy.  |                   |                    |           |                   |              |
|        | e. Ethics of IAP & WCPT. Professional ethics.                                    |                   |                    |           |                   |              |
|        | f. Modified Referral ethics in the practice of Physiotherapy                     |                   |                    |           |                   |              |
|        | g. Governing body of Physiotherapy Profession state & central level.             |                   |                    |           |                   |              |
| 2.     | EXERCISE PHYSIOLOGY AND NUTRITION:<br>a. Nutrition and physical performance.     | 15 Hrs            | 5 Hrs              | MK        |                   |              |
|        | b. Energy transfer.  |                   |                    |           |                   |              |
|        | c. Systemic adaptation during exercise.  |                   |                    |           |                   |              |
|        | d. Physical performance.   |                   |                    |           |                   |              |
|        | e. Factors affecting physical  |                   |                    |           |                   |              |

|     |  |        |        |    |    |    |
|-----|--|--------|--------|----|----|----|
|     | performance.   |        |        |    |    |    |
|     | f. Fatigue and lactate.  |        |        |    |    |    |
|     | g. Training.   |        |        |    |    |    |
|     | h. Fitness and testing.  |        |        |    |    |    |
|     | i. Obesity.  |        |        |    |    |    |
|     | j. Diabetes.   |        |        |    |    |    |
|     | k. Applied exercise physiology.  |        |        |    |    |    |
| 3.  | PATHOMECHANICS AND CLINICAL KINESIOLOGY:<br>Review of mechanical principles and applied biomechanics of human body.                                  | 25 Hrs | 10 Hrs | MK |    |    |
| 4.  | Review of various types of exercises, principles and its applications for joint mobility, muscle re-education, strengthening and endurance training. |        |        | MK |    |    |
| 5.  | Posture, analysis of normal and abnormal posture, posture training.  | 5 Hrs  | 5 Hrs  |    | DK |    |
| 6.  | Gait, analysis of normal and abnormal gait, gait training.   | 5 Hrs  | 15 Hrs |    |    | NK |
| 7.  | ADL, assessment and training of ADL.   | 3 Hrs  | 10 Hrs |    | DK |    |
| 8.  | Measuring tools in therapeutics.   | 5 Hrs  | 15 Hrs |    | DK |    |
| 9.  | ometer, pressure transducers, force plates, spondylometer, anthropometric and etc.   | 5 Hrs  | 10 Hrs | MK |    |    |
| 10. | ORTHOTICS, PROSTHETICS & BIOENGINEERING:   | 25 Hrs | 12 Hrs | MK |    |    |
|     | a. Orthosis of spine.  |        |        |    |    |    |
|     | b. Orthosis of upper limb.   |        |        |    |    |    |
|     | c. Orthosis of lower limb.   |        |        |    |    |    |
|     | d. AK and BK Prosthesis.   |        |        |    |    |    |
|     | e. Prosthetic fitting and training.  |        |        |    |    |    |
|     | f. Biomechanical principles governing them.  |        |        |    |    |    |

**3203-12: BASIC THERAPEUTICS.**

**SYLLABUS:**

| Sr. No | Content   | Teaching Hours    |                    | Must know | Desirable to know | Nice to know |
|--------|---|-------------------|--------------------|-----------|-------------------|--------------|
|        |   | Didactic (80 Hrs) | Practical (80 Hrs) |           |                   |              |
| 1.     | Basic exercises   | 5 Hrs             | 10 Hrs             |           |                   |              |
| 2.     | <b>Basic Electrotherapeutics:</b><br>Review the principles and applications of the following electrotherapy modalities and justify the effects and uses of it with evidence | 25 Hrs            | 25 Hrs             | MK        |                   |              |
|        | 1. Short wave diathermy.  |                   |                    |           |                   |              |
|        | 2. Microwave diathermy.   |                   |                    |           |                   |              |
|        | 3. Ultrasonic therapy.  |                   |                    |           |                   |              |
|        | 4. Ultraviolet radiation.   |                   |                    |           |                   |              |
|        | 5. Infrared radiation.  |                   |                    |           |                   |              |
|        | 6. Iontophoresis.   |                   |                    |           |                   |              |
|        | 7. Faradic stimulation.   |                   |                    |           |                   |              |
|        | 8. Dynamic currents.  |                   |                    |           |                   |              |
|        | 9. Interferential therapy.  |                   |                    |           |                   |              |
|        | 10. Cryotherapy.  |                   |                    |           |                   |              |
|        | 11. TENS.   |                   |                    |           |                   |              |
|        | 12. LASER Therapy.  |                   |                    |           |                   |              |
|        | 13. Paraffin wax bath.  |                   |                    |           |                   |              |
|        | 14. Hydrotherapy.   |                   |                    |           |                   |              |
|        | 15. Hydro collar packs.   |                   |                    |           |                   |              |
|        | 16. Contrast bath.  |                   |                    |           |                   |              |
|        | 17. Traction.   |                   |                    |           |                   |              |
|        | 18. Mechanical external compression therapy.  |                   |                    |           |                   |              |
|        | 19. Fluidotherapy.  |                   |                    |           |                   |              |
|        | 20. Phonophoresis.  |                   |                    |           |                   |              |
| 3.     | Pain and pain modulation.   | 5 Hrs             | 5 Hrs              |           | DK                |              |
| 4.     | Conventional electro diagnosis.   | 5 Hrs             | 5 Hrs              | MK        |                   |              |
|        | 1) FG Test.   |                   |                    |           |                   |              |
|        | 2) SD Curve.  |                   |                    |           |                   |              |
| 5.     | Electrocardiogram.  | 2 Hrs             | 3 Hrs              |           | DK                |              |

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|----|---|--------|--------|----|--|----|
| 6. | Echocardiography.   | 2 Hrs  | 2 Hrs  |    |  | NK |
| 7. | Physical & functional diagnosis.  | 20 Hrs | 20 Hrs | MK |  |    |
|    | 1. Clinical examination in general and detection of movement dysfunction.   |        |        |    |  |    |
|    | 2. Principles of pathological investigations and imaging techniques related to neuromuscular, skeletal and cardiopulmonary disorders with interpretation  |        |        |    |  |    |
|    | 3. Development screening development diagnosis, neurodevelopment assessment and motor learning-voluntary control assessment   |        |        |    |  |    |
|    | 4. Anthropometric measurements  |        |        |    |  |    |
|    | 5. Physical fitness assessment by   |        |        |    |  |    |
|    | i. Range of motion  |        |        |    |  |    |
|    | ii. Muscle strength, endurance and skills   |        |        |    |  |    |
|    | iii. Body consumption   |        |        |    |  |    |
|    | iv. Cardiac efficiency tests and spirometry   |        |        |    |  |    |
|    | v. Fitness test for sport   |        |        |    |  |    |
|    | 6. Electro-diagnosis, clinical and kinesiological electromyography and evoked potential studies. Biophysical measurements, physiotherapy modalities techniques and approaches, Electro diagnosis, conventional methods, electromyography sensory and motor nerve conduction velocity studies, spinal and somato-sensory evoked potentials |        |        |    |  |    |
|    | Radiological investigation.   | 16 Hrs | 10 Hrs | MK |  |    |
|    | 1) X – Ray.   |        |        |    |  |    |
|    | 2) CT / MRI Scan.   |        |        |    |  |    |
|    | 3) Blood investigation (routine)  |        |        |    |  |    |

**3203-13: ADVANCED THERAPEUTICS IN CARDIO-PULMONARY SCIENCES.**

**SYLLABUS:**

| Sr no. | Topic   | Teaching hours    |                       | Must know | Desire to know | Nice to know |
|--------|---|-------------------|-----------------------|-----------|----------------|--------------|
|        |   | Didactic (25 Hrs) | Practical's (100 Hrs) |           |                |              |
| 1.     | Advanced Cardiac diagnostics  | 2 Hrs             | 10 Hrs                | MK        |                |              |
| 2.     | Advanced Respiratory diagnostics  | 2 Hrs             | 10 Hrs                | MK        |                |              |
| 3.     | Monitoring and Managerial skills in all ICU   | 1 Hrs             | 10 Hrs                | MK        |                |              |
| 4.     | Advanced Physiotherapy approaches for Respiratory problems  | 5 Hrs             | 20 Hrs                | MK        |                |              |
| 5.     | Advanced Physiotherapy approaches for Cardio vascular problems  | 5 Hrs             | 20 Hrs                | MK        |                |              |
| 6.     | Recent advances in cardiopulmonary physiotherapy & Principles of chest physiotherapy:   | 10 Hrs            | 30 Hrs                | MK        |                |              |
|        | a) Advancement such as Ventilators, Respirators & its uses.   |                   |                       |           |                |              |
|        | I. Cardio-pulmonary resuscitation.  |                   |                       |           |                |              |
|        | II. Intensive care management<br>a) MICU.<br>b) RICU.<br>c) ICU.<br>d) CCU.<br>e) Neonatal ICU.<br>f) Post op management of transplantation surgeries |                   |                       |           |                |              |
|        | b) Investigations   |                   |                       |           |                |              |

**3203-14: BIostatISTICS AND RESEARCH METHODOLOGY.**

**SYLLABUS:**

| Sr No. | Contents  | TEACHING HOURS (100 Hrs) | Must Know | Desirable to Know | Nice to Know |
|--------|---|--------------------------|-----------|-------------------|--------------|
| 1      | <b>Research methodology:</b><br>I. How to read critique research.<br>II. Introduction to research: frame work: levels of measurement: variables<br>III. Basic research concepts: validity and reliability.<br>IV. Design, instrumentation and analysis for qualitative research.<br>V. Design, instrumentation and analysis for quantitative research<br>VI. Design, instrumentation and analysis for quasi-experimental research<br>VII. How to write research proposal<br>VIII. Ethics in research<br>IX. Importance of software in research<br>X. Importance of SPSS, PowerPoint, etc in research. | 60 Hrs                   | MK        |                   |              |
| 2      | <b>Biostatistics:</b><br>I. Descriptive and inferential statistics<br>II. Types of data qualitative and quantitative<br>III. Frequency distributions<br>IV. Describing data with graphs<br>V. Describing data with averages mode median mean<br>VI. Describing variability variance standard deviation etc<br>VII. Normal distributions<br>VIII. Interpretations of r   | 40 Hrs                   | MK        |                   |              |

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|--|---|--|--|--|--|
|  | IX. Hypothesis testing                                    |  |  |  |  |
|  | X. T tests  |  |  |  |  |
|  | XI. ANOVA   |  |  |  |  |
|  | XII. Probability  |  |  |  |  |
|  | XIII. Type I and type II errors                           |  |  |  |  |
|  | XIV. Parametric and non-parametric tests                  |  |  |  |  |
|  | XV. Simple statistical analysis using available software. |  |  |  |  |

**3203-21: GENERAL PHYSIOTHERAPY IN CARDIO PULMONARY SCIENCES**

**SYLLABUS:**

| Sr.no | Content   | Teaching Hrs.     |                     | Must know | Desirable to know | Nice to know |
|-------|---|-------------------|---------------------|-----------|-------------------|--------------|
|       |   | Didactic (350Hrs) | Practical (350 Hrs) |           |                   |              |
| 1.    | <p>Etio- Pathogenesis of various Cardio Respiratory conditions.</p> <p>a) Acquired conditions<br/>                     b) Inflammatory conditions<br/>                     c) Infectious conditions<br/>                     d) Congenital conditions<br/>                     e) Miscellaneous conditions</p>  | 75 Hrs            | 75 Hrs              | MK        |                   |              |
| 2.    | Detailed Screening of Cardio Respiratory conditions based on etio pathogenesis.   | 50 Hrs            | 50 Hrs              | MK        |                   |              |
| 3.    | <p>Cardiopulmonary Sciences:</p> <ul style="list-style-type: none"> <li>➤ Applied anatomy and physiology of cardiopulmonary system.</li> <li>➤ Intrauterine development of cardiopulmonary system and difference between the adult and pediatric system.</li> <li>➤ Assessment of Cardiopulmonary system, Investigation and its clinical implications.</li> <li>➤ Physiological changes of cardiopulmonary system in various positioning.</li> <li>➤ Principles of cardiopulmonary rehabilitation.</li> </ul> | 25 Hrs            | 25 Hrs              | MK        |                   |              |
| 4.    | Basis for Therapeutic decision making   | 25 Hrs            | 10 Hrs              | MK        |                   |              |
| 5.    | Long term consequences of various Cardio Respiratory disorders on various   | 25 Hrs            | 25 Hrs              | MK        |                   |              |

|     |   |        |        |    |    |  |
|-----|---|--------|--------|----|----|--|
|     | systems   |        |        |    |    |  |
| 6.  | Cardio Respiratory Disability evaluation in detail.   | 25 Hrs | 15 Hrs | MK |    |  |
| 7.  | <p>Physiotherapy assessment &amp; Management of Miscellaneous conditions with emphasis on Cardio Respiratory involvement.</p> <ul style="list-style-type: none"> <li>a) Wound healing in diabetes mellitus, leprosy, pressure sores</li> <li>b) Obesity</li> <li>c) Burns</li> <li>d) HIV</li> <li>e) Skin conditions</li> <li>f) Diabetes mellitus</li> <li>g) Malignancy</li> </ul> | 50 Hrs | 75 Hrs | MK |    |  |
| 8.  | National & International health programs for Cardio Pulmonary Physiotherapy interventions.  | 10 Hrs | -      | MK |    |  |
| 9.  | <p>Professional marketing strategies – Entrepreneurship</p> <ul style="list-style-type: none"> <li>a) Specialty clinics</li> <li>b) Independent Practice</li> <li>c) Joining organizations</li> <li>d) Groups</li> <li>e) NGO</li> <li>f) Specialty references</li> </ul>   | 15 Hrs | -      |    | DK |  |
| 10. | Management strategies of various Cardio Respiratory disorders   | 25 Hrs | 50 Hrs | MK |    |  |
| 11. | Preventative physiotherapy in Cardio Respiratory disorders and team approach.   | 25 Hrs | 25 Hrs |    | DK |  |

**3203-22: ADVANCES IN CARDIO-PULMONARY SCIENCES**

**SYLLABUS:**

| Sr.no | Content   | Teaching Hrs       |                     | Must know | Desirable to know | Nice to know |
|-------|---|--------------------|---------------------|-----------|-------------------|--------------|
|       |   | DIDACTIC (400 Hrs) | PRACTICAL (600 Hrs) |           |                   |              |
| 1     | Briefly review the anatomy, physiology applied anatomy and biomechanics of cardiopulmonary system.  | 20 HRS             | 20 HRS              | MK        |                   |              |
| 2     | Briefly evaluate the cardiopulmonary functions  | 10 HRS             | 20 HRS              | MK        |                   |              |
| 3     | Principles of assessment and management of various cardiopulmonary disorders.   | 20 HRS             | 20 HRS              | MK        |                   |              |
| 4     | Risk factors of various Cardio Pulmonary disorders  | 20 HRS             | =                   | MK        |                   |              |
| 5     | Pre operative & Post operative care of Oncologic conditions.  | 20 HRS             | 20 HRS              | MK        |                   |              |
| 6     | Cardiac rehabilitation in detail<br>a. Goals<br>b. Cardiac rehabilitation team<br>c. Rationale for cardiac rehabilitation<br>d. Indications and precautions<br>e. Contra indications and complications<br>f. Role of physiotherapy<br>g. Assessment protocols<br>h. Managerial skills | 30 HRS             | 40 HRS              | MK        |                   |              |
| 7     | Pulmonary rehabilitation in detail<br>a. Goals<br>b. Pulmonary rehabilitation team<br>c. Rationale for Pulmonary rehabilitation<br>d. Indications and precautions<br>e. Contra indications and complications  | 30 HRS             | 40 HRS              | MK        |                   |              |

|    |  |        |        |    |    |  |
|----|--|--------|--------|----|----|--|
|    | <ul style="list-style-type: none"> <li>f. Role of physiotherapy</li> <li>g. Assessment protocols</li> <li>h. Managerial skills mainly for obstructive and restrictive conditions, hyper ventilatory syndrome.</li> </ul>   |        |        |    |    |  |
| 8  | Rehabilitation and management of medical and surgical cardiac conditions (pre & post operation) like congenital, acquired cardiac problems.  | 30 HRS | 40 HRS |    | DK |  |
| 9  | Peripheral vascular diseases – Raynaud’s, Burger’s disease, DVT etc  | 10 HRS | 20 HRS | MK |    |  |
| 10 | Respiratory management following intensive care management of neurological and spinal cord injuries, OP Poisoning, Suicidal attempt, etc., And Multiple organ failure.   | 30 HRS | 40 HRS | MK |    |  |
| 11 | Pediatric cardiopulmonary rehabilitation in detail as similar to adult.  | 10 HRS | 20 HRS | MK |    |  |
| 12 | Role of physiotherapy in general surgical conditions (pre & post operation)  | 20 HRS | 40 HRS | MK |    |  |
| 13 | Physiotherapy in intensive care units (MICU, SICU, CCU, RICU, NICU, PICU) <ul style="list-style-type: none"> <li>a. Introduction</li> <li>b. Patient monitoring</li> <li>c. Bed side assessment</li> </ul>   | 30 HRS | 40 HRS | MK |    |  |
| 14 | Basic therapeutics being used in intensive care units <ul style="list-style-type: none"> <li>a. Airway clearance techniques</li> <li>b. Humidification &amp; aerosol therapy</li> <li>c. Oxygen therapy</li> <li>d. Lung expansion therapy</li> <li>e. Chest physiotherapy &amp; Respiratory PNF Technique</li> <li>f. Chest vibrator</li> <li>g. PEP device</li> <li>h. IMT device</li> </ul> | 20 HRS | 20 HRS | MK |    |  |

|    |  |        |        |    |    |    |
|----|--|--------|--------|----|----|----|
| 15 | Ventilators (artificial ventilation) – in detail   | 20 HRS | 20 HRS |    | DK |    |
| 16 | Intensive care management of following cardiopulmonary emergency conditions<br>a. ARDS<br>b. Acute respiratory failure<br>c. Tetanus<br>d. Drug over dose<br>e. Withdrawal syndrome<br>f. Acute MI<br>g. CLRT (Continuous Lateral Rotation Therapy)<br>h. Valvular diseases<br>i. Status asthmaticus | 10 HRS | 40 HRS | MK |    |    |
| 17 | Basic and advanced CPR   | 10 HRS | 40 HRS | MK |    |    |
| 18 | Pediatric cardio respiratory care in detail as similar to adult.   | 10 HRS | 20 HRS |    |    | NK |
| 19 | Cardio pulmonary deconditioning in aging.  | 10 HRS | 20 HRS | MK |    |    |
| 20 | Exercise prescription for cardiopulmonary patients with the special emphasis in differentiating the exercises for<br>a. Pediatric<br>b. Adult<br>c. Geriatrics<br>d. Women – based on their cardio respiratory status.   | 20 HRS | 30 HRS | MK |    |    |
| 21 | Conventional investigations for cardiopulmonary conditions like<br>a. Radiological<br>b. ECG<br>c. Echo<br>d. ABG<br>e. PFT<br>f. Routine blood investigations   | 10 HRS | 30 HRS | MK |    |    |
| 22 | Evidence based practice of physiotherapy in cardiopulmonary sciences<br>a. Medico legal issues<br>b. Effective documental  | 10 HRS | 20 HRS | MK |    |    |

|  |                            |  |  |  |  |  |
|--|----------------------------|--|--|--|--|--|
|  | c. Effective communication |  |  |  |  |  |
|--|----------------------------|--|--|--|--|--|

**PRACTICAL SKILLS:**

1. Physiotherapy assessment and management of various cardiopulmonary disorders (Adult & Pediatric) using principles of evidence based practice applying advanced physiotherapy skills along with routine measures.
2. Intensive care management
3. Basic and advanced CPR
4. Exercise prescription

**TEXT BOOKS:**

1. Cardiopulmonary Pulmonary Physiotherapy: Textbook by Jennifer pyrior
2. Cardiopulmonary Pulmonary Physiotherapy: Textbook by Sawosdky
3. Chest physiotherapy in Intensive care unit – Makezie, Willams & Wilkins
4. Cardio pulmonary symptoms in physiotherapy –Cohen M, & Churchil,
5. Clinical application of ventilator support – Kinby Churchill, Livingstone,

**REFERENCE BOOKS:**

1. Cardiopulmonary symptoms in physiotherapy practice – Cohen M., Churchill, Livingstone,
2. Cardio-pulmonary Physiotherapy – Irwin, C.V., Mosby, St. Louis
3. Pulmonary rehabilitation: guidelines to success – Hoidkins, Butterworth, Boston,
4. Cardiac rehabilitation – Amundsen I.R, Churchill, Livingstone,