KRISHNA VISHWA VIDYAPEETH, (DEEMED TO BE UNIVERSITY),

KRISHNA COLLEGE OF PHYSIOTHERAPY

KARAD, MAHARASHTRA.

MASTER OF PHYSIOTHERAPY (M. P. Th)

CBCS PATTERN SYLLABUS

M.P.Th - (ONCOLOGY PHYSIOTHERAPY)

PROGRAMME CODE:3206

RULES FOR EXAMINATION SCHEME LEADING TO

POST GRADUATE PHYSIOTHERAPY PROGRAMME
IN THE FACULTY OF PHYSIOTHERAPY
(Approved by the Board of Management)

MASTER OF PHYSIOTHERAPY (M. P. Th.)

PREAMBLE:-

The Department of Human Resource Development, Government of India, on the recommendation of the University Grants Commission (UGC) has accorded the status of a Deemed University to Krishna Vishwa Vidyapeeth, (Deemed to Be University), Karad for Faculty of Medicine, Dentistry. Physiotherapy Nursing, Allied Sciences and Pharmacy respectively.

The Degrees, Diploma and the Fellowship programmes of Krishna Vishwa Vidyapeeth, (Deemed to Be University), Karad shall have the same status as of those given by any Statutory University duly recognized by the University Grants Commission. (UGC).

The Master of Physiotherapy Programme is directed towards rendering training in Specialty discipline so as to enhance professional competence in order to fulfill requirement for Physiotherapy Education and Practice**.**

1. This shall apply to all the examinations leading to Post Graduate Physiotherapy namely Programmes offered: - Total Programmes offered: 10 Programmes.

Sr No	Programme Code	Programme Name
1.	3201	M.P.Th in Musculoskeletal Sciences
2.	3202	M.P.Th in Neuro Sciences
3.	3203	M.P.Th in Cardio Pulmonary Sciences
4.	3204	M.P.Th in Pediatric Neurology
5.	3205	M.P.Th in Community Health Sciences
6.	3206	M.P.Th in Oncology Physiotherapy
7.	3207	M.P.Th in Sports Physiotherapy
8.	3208	M.P.Th in Orthopedic Manual Therapy
9.	3209	M.P.Th in Obstetrics and Gynecology
10.	3210	M.P.Th in Geriatric Physiotherapy

SEMESTER WISE SUBJECTS:

Sr No	Course Code	Year	Semester	SUBJECT
1	3206-11	M.P.Th - I Year	I	1. Basic Sciences
2	3206-12			2. Basic Therapeutics
3	3206-21	M.P.Th - I Year	II	1. Advanced therapeutics in Specialty Subject
4	3206-22			2. Biostatistics and Research Methodology
5	3206-31	M.P.Th - II Year	III	1. General Physiotherapy in Specialty Subject – **Paper 1**
6	3206-32			2. Advances in Specialty Subject – **Paper 1**
7	3206-41	M.P.Th - II Year	IV	1. General Physiotherapy in Specialty Subject- **Paper 2**
8	3206-42			2. Advances in Specialty Subject – **Paper 2**

Duration: Master of Physiotherapy shall be a full time programme with duration of TWO academic years divided into FOUR semesters.

2. Eligibility for admission:

Applicant for admission to the programme, Master of Physiotherapy should have the Bachelor degree from I.A.P recognized institution or from the recognized university. Selection of candidate is strictly through Krishna PGAIET, which is conducted by Krishna Vishwa Vidyapeeth, (Deemed to Be University), Karad.

3. ELIGIBILITY FOR APPEARING FOR THE EXAM:

- The examination for the degree, Master of Physiotherapy shall be conducted twice in a academic year (i.e. Semester Pattern).
- Every student should present his / her dissertation at least three months prior to the fourth semester university examination. The acceptance of the dissertation by the examiners is important for the student's admission for the Written & Clinical (Practical) examination.
- Dissertation should be based on the Specialty Subject. A student who has submitted his / her dissertation once will not be required to submit a fresh dissertation if he / she re- appears for the examination in the same branch on a subsequent occasion, provided that the dissertation has been accepted by the examiners.

- The Degree of Master of Physiotherapy shall not be conferred upon a student unless he / she have passed in the Written, Practical and the Dissertation prescribed for the examination in accordance with the provision.
- The dissertation has been evaluated and approved AND
- Has passed both the headings i.e.

  (With minimum of 50%) in Theory and Practical including Internal Assessment for both.

4. GOALS OF THE M.P.TH PROGRAMME:

- The goal of training post- graduate candidate in the respective specialty is to enable him / her to function as a consultant in the respective Physiotherapy specialty. This requires a thorough knowledge of the fundamental and recent advances.
- He/she should be able to make logical decisions regarding patient management & adapt interventions independently.
- During this period he/she will be expected to acquire skills in teaching technology & gain experience in research methodology.
- He/she should practice Physiotherapy in respective specialty and maintain the highest regards for ethical aspect.
- The programme shall focus on clinical reasoning, problem solving and measurement of treatment outcome, emphasizing on the recent diagnostic & therapeutic trends and skill specific Physiotherapy.

5. OBJECTIVES OF THE PROGRAMME: -

At the end of the programme the candidate shall be able to:

- Acquire the in-depth knowledge of structure and function of human body related to the respective branch of specialty.
- Acquire the in-depth knowledge of movement dysfunction of human body & principles underlying the use of physiotherapeutic interventions for restoring movement dysfunction towards normalcy.
- Ability to demonstrate critically appraises recent physiotherapeutic and related medical literature from journals & adapts diagnostic & therapeutic procedures based on it.
- Ability to perform skill in Physical & functional diagnosis pertaining to patient under care.
- Ability to make clinical decision & select appropriate outcome measures based on the comprehensive knowledge of theoretical aspects of specialty.
- Expertise in evidence-based skill in the management of movement dysfunction.
- Expertise in health promotion & quality restoration of functional movement pertaining to specialty.
- Planning and implementation of treatment programme adequately and appropriately for all clinical

conditions related to respective specialty in acute and chronic stage, in intensive care, indoor and outdoor institutional care, independent practice, on fields of sports and community and during disaster or natural calamities.

- Proficiency in planning and executing Physiotherapy services and teaching technology skills.
- Develop managerial and administrative skills.
- Develop the knowledge of legislation applicable to compensation for functional disability & appropriate certification.

POSTGRADUATE PROGRAMME OUTCOMES

M.P.Th (Master of Physiotherapy)

The course is of two years duration (Divided into 4 Semesters) advanced learning programme in Physiotherapy with CBCS Pattern.

Total Specialties offered: 10 Specialties

1. M.P.Th In Musculoskeletal Sciences
2. M.P.Th In Neuro Sciences
3. M.P.Th In Cardio Pulmonary Sciences
4. M.P.Th In Pediatric Neurology
5. M.P.Th In Community Health Sciences
6. M.P.Th In Oncology Physiotherapy
7. M.P.Th In Sports Physiotherapy
8. M.P.Th In Orthopedic Manual Therapy
9. M.P.Th In Obstetrics And Gynecology
10. M.P.Th In Geriatric Physiotherapy

M.P.Th - IST YEAR INCLUDES TWO SEMESTERS NAMELY,

- **I - Semester:** It is common for all the specialties which include the two subjects Basic Sciences & Basic Therapeutics.
- **II - Semester:** Biostatistics and Research Methodology is a common subject for all specialties & Advanced Therapeutics in Specialty Subject is the second one.

M.P.Th – IIND YEAR INCLUDES TWO SEMESTERS NAMELY,

- **III - Semester:** It includes two subjects which are specialty specific namely, General Physiotherapy in Specialty Subject - Part I & Advances in Specialty Subject - Part I
- **IV - Semester:** It includes two subjects which are specialty specific namely, General Physiotherapy in Specialty Subject- Part II & Advances in Specialty Subject - Part II
- ***Dissertation:** An individual research project preferentially interventional study is mandatory to be completed before appearing for the IV - Semester examination.

M.P.Th (FIRST YEAR): I - SEMESTER

1. **BASIC SCIENCES (3206-11)**

COURSE OBJECTIVES:

- The student should be able to know the background of Physiotherapy profession, basic ethics and its principles.
- To understand and apply the principles of exercise physiology and nutrition
- To master various assessment tools, test.
- To obtain knowledge of Orthotics & Prosthetics.

COURSE OUTCOMES:

At the end of the course the student should be able to apply the basic principles and ethics of Physiotherapy profession, Biomechanics, Patho-mechanics and in depth Kinesiology of human body, all the assessments and clinical tests, diagnosis of various conditions, in depth knowledge of the Orthotics and Bio-engineering.

2. **BASIC THERAPEUTICS (3206-12)**

COURSE OBJECTIVES:

The student should be able to obtain detail knowledge with evidence base of all the Electrotherapeutic modalities, Electro-Diagnostic tests with its application for diagnosis and treatment of Physiotherapy conditions

COURSE OUTCOMES:

At the end of the course the student should have in depth knowledge of the Basic Electrotherapeutics, Physical and Functional Diagnosis, EMG / NCV and Radiological investigations.

M.P.Th (FIRST YEAR): II - SEMESTER

1. **ADVANCED THERAPEUTICS SPECIALITY SPECIFIC (3206-21)**

COURSE OBJECTIVES:

- To interpret various therapeutics used in the treatment of speciality specific conditions.
- To evaluate and generate a diagnosis and differential diagnosis of all related conditions related to speciality and its complications.
- Demonstrate condition specific various skills in the treatment.

COURSE OUTCOMES:

At end of the session the student will be able to learn the conditions pertaining to the speciality, the diagnostic test for the same. The students shall learn to make a correct diagnosis and also a differential diagnosis and learn the advanced techniques to treat the same.

2. **BIOSTATISTICS AND RESEARCH METHODOLOGY (3206-22)**

COURSE OBJECTIVES:

- To understand the statistical measures used for analysis and interpretation of research data.
- Enhanced training to apply the information on research design and their implementation
- To identify, read, critique research articles and understand and apply the principles of research to perform a guided research.

COURSE OUTCOMES:

- At the end of the course the student should have a sound knowledge regarding the basic concept of research, research designs, types of data, sampling methods, interpretation of result, and various statistical tests.
- The student will able to identify appropriate statistical technique reference, use of various software packages for analysis and data management. Interpretation of the results and its application in Physiotherapy.
- The student will be able to learn fundamental of reading and understanding research methods, design and statistics.
- Special emphasis is given to Biostatistics and Research methodology and for completing a scientific research project in the second year as per their elective subject.

M.P.Th (SECOND YEAR): III - SEMESTER

1. **GENERAL PHYSIOTHERAPY IN SPECIALTY SUBJECT – PAPER 1 (3206-31)**

COURSE OBJECTIVES:

- Evoke and interpret clinical signs and symptoms of speciality specific disorders & interpret various diagnostic tests, clinical and special investigations used in the diagnosis of the conditions.
- Management of patient, consultation, identifying the problem, derive a provisional diagnosis with differential diagnosis and to chalk out a treatment plan.
- Maintain a precise patient documentation.
- Discuss and develop a specific exercise prescriptions plan with their clinical use, and the sequence of treatment.

COURSE OUTCOMES:

- Be able to apply the knowledge for planning and evaluation of teaching methods in Physiotherapy.
- Be able to apply the knowledge on clinical education to spread awareness and guidance to common people about health and disease.
- Understand the pathophysiology of common conditions, their management and its effects on body systems.
- Assess patients' physical function, considering disease and treatment-related impairments.
- Design and implement evidence-based Physiotherapy interventions as per the health issues.

2. **ADVANCES IN SPECIALTY SUBJECT – PAPER 1 (3206-32)**

COURSE OBJECTIVES:

- Understand the application of the information regarding recent advances in Physiotherapy for patient care.
- Application and proper implementation of specific evidences available for assessment and management appropriate to the health conditions.

COURSE OUTCOMES:

- The students learn and excel in various aspects of Physiotherapy as per their speciality in theoretical and practical knowledge with a solid platform and tend to train them to be the best in the field.
- To analyse and undertake data for research purpose and its documentation for long life learning in Physiotherapy.
- To develop educational experience for proficiency in profession and promote Preventive and Rehabilitative aspect on the society.

M.P.Th (SECOND YEAR): IV - SEMESTER

1. **GENERAL PHYSIOTHERAPY IN SPECIALTY SUBJECT- PAPER 2 (3206-41)**

COURSE OBJECTIVES:

To equip Physiotherapy students with the knowledge and skills necessary to provide problem specific effective rehabilitation and supportive care for patients.

COURSE OUTCOMES:

- Recognize and manage potential complications specific to the condition.
- Demonstrate knowledge of protocol specific principles and their application in Physiotherapy practice.
- Communicate effectively with patients, their families, and the multidisciplinary team.
- Critically evaluate current research in the area of rehabilitation to inform clinical decision-making.

2. **ADVANCES IN SPECIALTY SUBJECT – PAPER 2 (3206-42)**

COURSE OBJECTIVES:

To provide students with an in-depth understanding of recent developments and emerging trends in the specialty subject, focusing on innovative diagnostic techniques, treatment modalities, and research breakthroughs.

COURSE OUTCOMES:

- Analyze cutting-edge research and its potential clinical applications.
- Evaluate novel diagnostic technologies and their impact on early detection and personalized treatment.
- Critically assess emerging advanced and targeted therapies.
- Explain advancements in Prevention strategies and Risk assessment.
- Interpret complex clinical trial data and their implications for patient care.
- Describe innovations and apply knowledge of recent advances to case studies and clinical scenarios.

END OF PROGRAMME:

After completion of PG (M.P.Th) Programme, with the above mentioned Programme features the Post-Graduates will be equipped with advanced knowledge in respective specialty related to Technical, Problem Solving and Scientific skills to practice with Evidence Based Physiotherapy Practice through firm decision making process in assessment and treatment, establish advance research hypotheses and undertake research works effectively within the healthcare sectors and community safely and efficiently inculcating effective communication skills.

TOTAL HOURS: MPTh

Semester	Subject	Theory	Theory Credit point	Practical	Practical Credit point	Total Credit point
I - MPTh						
I - Semester	Basic Sciences	100	7	100	7	14
	Basic Therapeutics	100	7	100	7	14
II - Semester	Advanced Therapeutics in Speciality	100	7	150	5	12
	Biostat & Research	100	7			7
II - MPTh						
III - Semester	General PT in Speciality **Paper - 1**	200	13	225	8	21
	Advances in Speciality **Paper - 1**	200	13	250	8	21
IV - Semester	General PT in Speciality **Paper - 2**	200	13	225	8	21

	Advances in Speciality **Paper - 2**	200	13	250	8	21
		1200	**80**	**1300**	**51**	**131**
Total Hrs: 2500				**Total Credit point: 131**		

EXAMINATION SCHEME:

	Theory		**Practical**	**IA**	
				Theory	**Practical**
Sem. I	Basic Sciences (100 Marks)	Basic Therapeutics (100 Marks)	-	50 marks x 2 Subjects	-
Sem. II	Advanced Therapeutics in Speciality (100 Marks)	Biostatistics & Research Methodology (100 Marks)	Advanced Therapeutics in Speciality (250 Marks)	50 marks x 2 Subjects	50 Marks
Sem. III	General Physiotherapy in Speciality **Paper – 1** (100 Marks)	Advances in Speciality **Paper – 1** (100 Marks)	-	50 marks x 2 Subjects	
Sem. IV	General Physiotherapy in Speciality **Paper – 2** (100 Marks)	Advances in Speciality **Paper – 2** (100 Marks)	Specialty Practical (300 Marks)	50 marks x 2 Subjects	50 Marks
Total: 1850 marks					

EXAMINATION PATTERN:

THEORY: (ALL SEMESTERS)

Q1. 10 BAQ (All compulsory)	10 x 5 =50 marks
Q2. 2 LAQ (All compulsory)	2 x 25 = 50 marks
	Total: 100 marks

***** INTERNAL ASSESSMENT: Out of 50 MARKS for each Subject**

PRACTICAL: (II & IV SEMESTER)

SEMESTER II PATTERN

1. Long Case (Specialty)	100 marks
2. Short Case 1. (Assessment)	50 marks
3. Short Case 2. (Management)	50 marks
4. Spots	50 marks
	Total: 250 marks + IA: 50 marks = 300 Marks

SEMESTER IV PATTERN

1. Long Case (Specialty)	100 marks
2. Short Case (Assessment)	50 marks
3. Short Case (Management)	50 marks
4. Dissertation Presentation	50 marks
5. Microteaching	50 marks
	Total: 300 marks + IA: 50 marks = 350 Marks

MPTh - I: SEMESTER: I

COURSE: MPTh IN ONCOLOGY PHYSIOTHERAPY

SUBJECT: BASIC SCIENCES

Subject	Theory	Credit	Practical	Credit	Total Credits
Basic Sciences	100	7	100	7	14

Sr. No	Content	Teaching Hours (200 Hrs.)		MK	DK	NK
		Didactic (100 Hrs.)	Practical (100 Hrs.)			
1.	**PRINCIPLES AND ETHICS:** a. Theoretical background of Physiotherapy profession.	5 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:** a. Nutrition and physical performance.	15 hrs	15 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:** Review of mechanical principles and applied biomechanics of human body.	10 hrs	5 hrs	MK		
4.	Review of various types of exercises, principles and its applications for joint mobility, muscle re-education, Strengthening and endurance training.	15 Hrs	5 Hrs	MK		
5.	Posture, analysis of normal and abnormal posture, posture training.	5 hrs	10 hrs		DK	
6.	Gait, analysis of normal and abnormalgait, gait training.	5 hrs	15 hrs			NK
7.	ADL, assessment and training of ADL.	5 hrs	10 hrs		DK	
8.	Clinical assessment, clinical tests and diagnosis of: • Musculoskeletal conditions • Manual Therapy clinical reasoning • Sports conditions • Neurological conditions • Cardio-pulmonary conditions • Obstetrics and Gynecology conditions • Pediatric conditions • Geriatric conditions • Oncology conditions • Community Health conditions	10 hrs	15 hrs	MK		
9.	Measuring tools in therapeutics: Goniometry, accelerometer, pressure transducers, force plates, spondylometer, Body composition, anthropometric measurements, etc.	5 hrs	10 hrs	MK		
10.	ORTHOTICS, PROSTHETICS &BIOENGINEERING:	25 hrs	15 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.					

BASIC SCIENCES - RECOMMENDED BOOKS:

1. Ross and Wilson Anatomy and Physiology in Health and Fitness – Kathleen. J, Churchill Livingstone.
2. Samson Wright's Applied Physiology – Neil and Joel, Oxford press.
3. Principles of Anatomy – Harper Collins College Publications
4. Anatomy and Physiology for Physiotherapists – Mottram, Moffat, Blackwell Scientific
5. Atlas of Anatomy – Tank Patrick, Lippincot Williams
6. Surface and Radiological Anatomy – Halim A, CBS

REFERENCE BOOKS:

1. Clinical Kinesiology for the Physical therapist Assistants – Lippert L, Jaypee.
2. Brunnstrom's Clinical Kinesiology – Letimkuni W, Jaypee.
3. Clinical Kinesiology – Laura Weiss, Jaypee.
4. Joint Structure & Function – Levangie P, Norkin C, Jaypee.
5. Basic Biomechanics of the musculoskeletal system – Nordin M, Lippincot Williams.
6. Biomechanical Basis of Movement – Hamill J & Krutzen K M, Lippincot Williams.
7. Measurements of Joint Motion – Norkin C, F. A. Davis.
8. Principles of Mechanics & Biomechanics – Bell, Frank, Stanley Thornes Pvt. Ltd.
9. Basic Biomechanics – Hall, Susan J, McGraw hill.
10. Kinesiology – Oatis, Carol A, Lippincot Williams.
11. Applied Kinesiology – Robert Frost, North Atlantic Books.
12. Biomechanics of Spine – White and Punjabi, Lippincot Williams

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MPTh - I: SEMESTER: I

COURSE: MPTh IN MUSCULOSKELETAL SCIENCE

SUBJECT: BASIC THERAPEUTICS

Subject	Theory	Credit	Practical	Credit	Total Credits
Basic Therapeutics	100	7	100	7	14

Sr. No	Content	Teaching Hours (200 Hrs.)		MK	DK	NK
		Didactic (100Hrs)	Practical (100Hrs)			
1.	**Basic Electrotherapeutics:** 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. Electric stimulation.					
	8. D i - Dynamic currents.					
	9. Interferential therapy.					
	10. Cryotherapy.					
	11. TENS.					
	12. LASER Therapy.					
	13. Paraffin wax bath.					
	14. Hydrotherapy.					
	15. Hydro collator packs.					
	16. Contrast bath.					
	17. Traction.					
	18. Mechanical external compression therapy.					
	19. Fluidotherapy.					
	20. Phonophorosis.					
	21. Shock Wave Therapy					
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.	10 hrs	10 hrs		DK	
6.	Echocardiography.	10 hrs	10 hrs			NK
7.	Physical & functional diagnosis.	25 hrs	25 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. Physical fitness assessment: • Cardiac efficiency tests and spirometry • Fitness test for sport					
	5. Electro diagnostics-EMG/NCV **A. Electromyography (EMG)** Electro-diagnosis, clinical and kinesiological electromyography and evoked potential studies. 1. Instrumentation. 2. Types of electrodes. 3. Cathode ray oscilloscope digital processing. 4. Electrical safety. 5. Artifacts. 6. Normal and abnormal motor action potential. 7. EMG Examination. a. Muscle at rest. b. Insertional activity. c. Minimum effort. d. Maximum effort. 8. Motor unit's potential in disease. • Motor neuron disease. • Hereditary motor neuron disease. • Poliomyelitis. • Muscular dystrophy. • Inflammatory myopathies. • Congenital myopathies • Myotonia. • Metabolic myopathies. 9) Quantitative methods in EMG.					

	B. Nerve conduction studies (NCV): I. Motor and sensory conduction. II. Physiology of nerve conduction. III. General factors affecting nerve conduction. IV. Nerve stimulation. V. H wave. VI. F wave. VII. Entrapment syndromes. a) Carpel tunnel syndrome. b) EMG studies in Myasthenia gravis. c) EMG studies in Decremental studies Lambert myasthenia syndrome. d) Electro diagnosis in Radiculopathy. e) Peripheral neuropathies. - Nerve conduction changes in peripheral neuropathy. - EMG changes in peripheral neuropathy.					
8.	Radiological investigation. 1) X – ray. 2) CT / MRI Scan. 3) Blood investigation (routine)	20 hrs	20 hrs	MK		

BASIC THERAPEUTICS - RECOMMENDED BOOKS:

1. Exercise Physiology, energy, nutrition and human performance – McArdle, Katch &Katch, Lippincot Williams.
2. Illustrated principles of exercise physiology – Axen. K, Kathleen. V, Prentice Hall.
3. Essentials of Exercise Physiology – Shaver Larry. G, Surjeet Publications.
4. Physiology of Sports and Exercise – Majumdar. P, New Central Book.
5. Exercise and the Heart – Froliecher, Victor. F, Elsevier.
6. Textbook of Work Physiology – Astrand and Rodahl, McGraw Hill.
7. Kinanthropometry and Exercise Physiology Laboratory manual tests, procedures anddata-Erston, Reilly, F & FN Spon.

REFERENCE BOOKS:

1. Communication Skills in Clinical Practice – Sethuraman K. R.

2. Handbook of Educational Technology – Elington Henry, Kogan Page.
3. Physical Therapy Administration & Management – Hickok, Robert J, Williams &Wilkins.
4. Clinical Decision making in Rehabilitation – Basmajian, John V, Churchill Livingstone.
5. Handbook of Clinical Teaching – Watts Nancy, Churchill Livingstone.
6. Physical Therapy Ethics by Gabard and Martin (Sep 2, 2010)
7. Management in Physical Therapy Practices by Catherine G. Page (Sep 23, 2009)
8. Physical Rehabilitation: Evidence-Based Examination, Evaluation, and Intervention byMichelle H. Cameron and Linda Monroe (Apr 5, 2007)
9. Physical Therapy Management by Ronald W. Scott and Christopher L Petrosino (Sep 1,2007)

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MPTh – I: SEMESTER: II

COURSE: MPTh IN ONCOLOGY PHYSIOTHERAPY

SUBJECT: BIOSTATISTICS AND RESEARCH METHODOLOGY

Sr No.	Contents	TEACHING HOURS Theory (100 Hrs)	Must Know	Desirable to Know	Nice to Know
1	**Research methodology:** I. How to read critique research. II. Introduction to research: frame work: levels of measurement: variables III. Basic research concepts: validity and reliability. IV. Design, instrumentation and analysis for qualitative research. V. Design, instrumentation and analysis for quantitative research VI. Design, instrumentation and analysis for quasi-experimental research VII. How to write research proposal VIII. Ethics in research IX. Importance of software in research X. Importance of SPSS, PowerPoint, etc in research.	60 hrs	MK		

2	**Biostatistics:** I. Descriptive and inferential statistics II. Types of data qualitative andquantitative III. Frequency distributions IV. Describing data with graphs V. Describing data with averages modemedian mean VI. Describing variability variancestandard deviation etc VII. Normal distributions VIII. Interpretations of result 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.	40 hrs	MK		

TEXT BOOKS FOR RESEARCH METHODOLOGY AND BIOSTATISTICS:

1. Research Methodology .Methods and Techniques C.R. Kothari New Age InternationalPublishers.2nd edition 2008
2. Rehabilitation Research: Principles And Applications By Elizabeth Domholdt(ElsevierScience Health Science Div, 2004)
3. Research Methods for clinical therapists by Hicks Carolyne, Churchill
4. Foundations of clinical Research by Portney & Watkins,Davis
5. Research methodology by Kothari New Age international
6. Research Methodology for health professionals by Goyal,Jaypee
7. Methods in Biostatistics By Mahajan,B.K Jaypee
8. Principles & practice of Biostatistics By Dixit ,J.V Bhanot

TEACHING TECHNOLOGY:

1. Public Power And Administration – Wilenski, Hale And Iremonger, 1986
2. Physical Therapy Administration And Management – Hickik Robert J
3. A Practical Guide for Medical Teachers : John A Dent& Ronald M Harden: ElsevierHealth Sciences: 2009
4. International Handbook of Medical Education : Abdul W Sajid, Christie H McGuire et al:Greenwood Press 1994
5. Principles Of Medical Education by. Tejinder Singh, Piyush Gupta,DaljitSingh.year: 2009. Edition: 3rd edition Publisher: Jaypee brothers.

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M.P.Th - I:

ADVANCED THERAPEUTICS IN ONCOLOGY

Course Credit for ADVANCED THERAPEUTICS IN ONCOLOGY PHYSIOTHERAPY		
	Hours	Credits
Theory	100	7
Practical	150	5

Sr no.	**Topic**	**Teaching hours**		**Must know**	**Desire to know**	**Nice to know**
		Didactic (100 Hrs)	**Practical's (150 Hrs)**			

1	Therapeutics used in Oncologicalconditions: • Muscle reeducation approach, • Biofeedback training, • Sensory rehabilitation, • Myofascial release technique, • Inhibitory and facilitationtechnique, • Functional re-education, • skill training, • A.D.L training, • Tapping in oncologicalconditions. • Balance training • Recent oncological Physiotherapy technique - Mental imagery technique, virtual reality therapy, Pilate's therapy, Hydrotherapy etc	40	40	MK		
2	**Various Electrotherapy modalitiesused in oncology physiotherapy:** • **FES** • **NMES** • **Biofeedback**	**05**	**20**	**MK**		
3	Pain management and Relaxation training in Oncology	5	15	MK		
4	Evaluation of cancer complications: Lymphedema, Musculoskeletal, neurological, cardiopulmonary	15	15	MK		

5.	Lymphatic manipulations	10	20	MK		
6	ICU care in Oncology	10	20	MK		
7	Aqua Lymphatic Therapies: An Alternate Approach to Controlling,Treating & Preventing Lymphedema	10	15	MK		
8	**Basics and Principles in Supportiveand palliative therapy.**	**05**	**05**	**MK**		

REFERENCE BOOKS:

1. Assistive technology and principles. Cook Albert M
2. Cancer pain management : a comprehensive approach. Simpson Koren H
3. ACSM guide to exercise and cancer survivorship. Irwin Mellindal
4. Lymphedema presentation and diagnosis. Greek Arik
5. Cancer: Principles and practices of oncology. Devita Vincent
6. Dorfman & czerniks bone tumors. Czeriak Bogdan
7. American cancer society- text book of clinical oncology. Murphy G P
8. Clinics in physical therapy: physical therapy for cancer patients. Mc Garvey Charles
9. Handbook of cancer emergencies. Mark A Marinella
10. Manual on prevention and control of common cancers.WHO regnional publications

The palliative care and Hospice Caregivers

II MPTh

MPT - II: SEMESTER: IV

COURSE: MPT IN ONCOLOGY PHYSIOTHERAPY

GENERAL PHYSIOTHERAPY IN ONCOLOGY- PAPER I

Course Credit for General Pt In Oncology- Paper I			**Course Credit for General Physiotherapy In Oncology- Paper II**		
	Hours	Credits		Hours	Credits
Theory	200	13	Theory	200	13
Practical	225	8	Practical	225	8

GENERAL PT IN ONCOLOGY PHYSIOTHERAPY - PAPER I

Course Credit for General Pt In Oncology- Paper I		
	Hours	Credits
Theory	200	13
Practical	225	8

Sr.No	Content	Teaching hrs.		Must know	Desirable to know	Nice to know
		Didactic (200 Hrs)	Practical (225 Hrs)			
1	Oncology, Epidemiology, Classification, Symptomatology, Patho-Physiology and Management of different Oncological conditions.	30	35	MK		
2	Physiotherapy interventions in: Breast and Reproductive cancer Exercises for Prevention and treatment of Prostate cancer.	30	60	MK		
3	Management of bladder and bowel dysfunction in cancer	30	30	MK		
4	Self-treatment, Exercise prescription, management and home program, Report writing. Conceptual frame work for clinical practice. Requirements for medical opinion or treatment, documentation, prescription, management and advice.	30	30	MK		
5	Physiotherapy management of musculoskeletal complications IN, • Radiotherapy and post radiotherapy • Chemo and post chemo physiotherapy management	20	30	MK		
6	Nutrition and deficiency management in cancer patients	15	5	MK		

7	Basis for Therapeutic decision making: Planning and implementation of Physiotherapy treatment for various types of cancer. Prognosis and Therapy, Locating evidences, challenges and barriers in EBP.	25	5	MK		
8	Long term consequences of chronic cancer patients on various systems • Muscle weakness • Impaired functional disability .	15	25	MK		
9	Professional marketing strategies – Entrepreneurship • Specialty clinics • Independent Practice	05	5		DK	

REFERENCE BOOKS:

1. Assistive technology and principles. Cook Albert M
2. Cancer pain management : a comprehensive approach. Simpson Koren H
3. ACSM guide to exercise and cancer survivorship. Irwin Mellindal
4. Lymphedema presentation and diagnosis. Greek Arik
5. Cancer: Principles and practices of oncology. Devita Vincent
6. Dorfman & czerniks bone tumors. Czeriak Bogdan
7. American cancer society- text book of clinical oncology. Murphy G P
8. Clinics in physical therapy: physical therapy for cancer patients. Mc Garvey Charles
9. Handbook of cancer emergencies. Mark A Marinella
10. Manual on prevention and control of common cancers.WHO regnional publications
11. The palliative care and Hospice Caregivers workbook. Lura Pethtel

M.P.Th - II

GENERAL PHYSIOTHERAPY IN ONCOLOGY PHYSIOTHERAPY - PAPER II

Course Credit for General Pt In Oncology- Paper I			Course Credit for General Pt In Oncology- Paper II		
	Hours	Credits		Hours	Credits
Theory	200	13	Theory	200	13
Practical	225	8	Practical	225	8

3206-21: GENERAL PHYSIOTHERAPY IN ONCOLOGY- PAPER II

Course Credit for General Physiotherapy In Oncology- Paper II		
	Hours	Credits
Theory	200	13
Practical	225	8

Sr.No	Content	Teaching hrs.		Must kno w	Desirable to know	Nice to know
		Didactic (200 Hrs)	Practical (225 Hrs)			
1.	Introduction to Genetic counseling, Stemcell therapy, Gene therapy	25		MK		
2.	Aids and appliances, adaptive functional devices to improve dysfunction in cancerpatients	25	40	MK		
3.	Evidence based Oncological Physiotherapytechniques - Mental imagery technique, virtual reality therapy, Pilate's therapy, Hydrotherapy etc	25	40	MK		

4.	Institutional & community based rehabilitation for oncological patients.	25	40	MK		
5.	Psychosocial aspects and Psychiatry problems in oncologicalconditions. Psychosomatic conditions in cancer and their management.	20	25	MK		
6.	Physiotherapy management of Neuro complications IN, • Radiotherapy and post radiotherapy • Chemo and post chemo physiotherapy management	15	25	MK		
7.	Long term consequences of chronic cancer patients on various systems • Movement dysfunction • Changes in the Neuro-physiological functions & Cardio respiratory status.	15	20	MK		
8.	Rehabilitation act and financial aid for cancer patients.	20		MK		
9.	Physiotherapy assessment & Management of Miscellaneous conditions in cancer patients: • Wound healing in diabetes mellitus, pressure sores • Obesity and cancer • HIV Patients • Skin conditions, etc. • Joining organizations • Groups • NGO • Specialty references	15	20	MK		
10.	Management strategies of various health disorders in association with cancer Pathology	15	15	MK		

REFERENCE BOOKS:

12. Assistive technology and principles. Cook Albert M

13. Cancer pain management : a comprehensive approach. Simpson Koren H
14. ACSM guide to exercise and cancer survivorship. Irwin Mellindal
15. Lymphedema presentation and diagnosis. Greek Arik
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19. Clinics in physical therapy: physical therapy for cancer patients. Mc Garvey Charles
20. Handbook of cancer emergencies. Mark A Marinella
21. Manual on prevention and control of common cancers.WHO regnional publications
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KRISHNA INSTITUTE OF MEDICAL SCIENCES"DEEMED TO BE UNIVERSITY", KARAD

ADVANCES IN ONCOLOGY PHYSIOTHERAPY PAPER I

Course Credit for Advances In Oncology Paper I			Course Credit for Advances In Oncology Paper II		
	Hours	Credits		Hours	Credits
Theory	200	13	Theory	200	13
Practical	250	8	Practical	250	8

ADVANCES IN ONCOLOGY PHYSIOTHERAPY PAPER I

Course Credit for Advances In Oncology Part I		
	Hours	Credits
Theory	200	13
Practical	250	8

Srno	Contents	Teaching hours		Must Know	Desirableto know	Nice To know
		Didactic (200 hrs)	Practical (250 hrs)			
1.	Clinical signs and symptoms, physical and functional evaluation in all types of cancer.	20	30	MK		
2.	Principles of pathological, hematological, bacteriological investigations related to oncological disorders with interpretation.	20	30	MK		
3.	Diagnostic imaging in cancer pathology- Clinical interpretation, its significance(X rays, Barium swallow, Barium enema, USG abdomen, Endoscopy, Mammography & mammogram, MRI, Ultrasound, PET SPECT, Ct Scan, Laproscopy, Pap smear, bone scan)	20	30		DK	

	Histopathological, hematological, bacteriological investigations, Nuclear and radio imaging					
4.	Physiotherapy interventions in: • Systemic cancer • CNS neoplasia • Lung and respiratory tract cancer	20	20	MK		
5.	Electrophysiological assessments used in cancer pathology	30	30	MK		
6.	Exercise and cancer related fatigue and its evaluation	20	30	MK		
7.	Clinical decision making based on Oncological conditions	20	-	MK		
8.	Problem based learning for various clinical conditions in oncology physiotherapy.	10	20	MK		
9.	Physiotherapy management of musculoskeletal disorders in Post oncological surgeries	15	20	MK		
10	Evidences in interventions for oncology related impairments • In head neck cancers • In breast cancer • Bone tumours	15	20	MK		
11	Recent advancement in oncology Orthosis: Prescription, training & Prosthetic management for mastectomy	10	20	MK		

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ADVANCES IN ONCOLOGY PHYSAIOTHERAPY PAPER II

Course Credit for Advances In Oncology Paper I			Course Credit for Advances In Oncology Paper II		
	Hours	Credits		Hours	Credits
Theory	200	13	Theory	200	13
Practical	250	8	Practical	250	8

ADVANCES IN ONCOLOGY PAPER II

Course Credit for Advances In Oncology Paper II		
	Hours	Credits
Theory	200	13
Practical	250	8

Srno	Contents	Teaching hours		Must Know	Desirableto know	Nice To know
		Didactic (200 hrs)	Practical (250 hrs)			
1.	Clinical examination and detection of movement dysfunction in cancer patients.	20	30	MK		
2.	Physiotherapy interventions in: • Systemic cancer • CNS neoplasia • Lung and respiratory tract cancer	20	30	MK		
3.	Neuropsychological tests in cancer pathology	20	30		DK	
4.	Assessment of pain and scales related topain evaluation.	20	30	MK		
5.	Outcome measures used in oncologicalphysiotherapy. Pain scales Quality of life Anxiety Motor impairments Functional disabilities Focal disabilities Cognitive impairment and disabilities	20	30	MK		
6.	Recent advances in oncological physiotherapy, Pain modulation andRehabilitation	20	30	MK		
7.	Recent advances in Vocational rehabilitation inoncology disorders with disability	15	30		DK	

8.	Evidences in interventions for oncologyrelated impairments • Cardio respiratory cancers • Systemic cancers	20	-	MK		
9.	Pediatric oncology	25	20	MK		
10.	Physical therapy for metastatic cancer	20	20	MK		

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13. Cancer pain management : a comprehensive approach. Simpson Koren H
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