



SHRI
DHARMASTHALA
MANJUNATHESHWARA
UNIVERSITY

Ordinance Governing
MPT Degree Course 2 Years
Curriculum 2021-22

SHRI DHARMASTHALA MANJUNATHESHWARA UNIVERSITY

(A State Private University established under the Shri Dharmasthala Manjunatheshwara University Act No 19 of 2018 of Government of Karnataka and Notification No. ED 261 URC 2018 dated 19th December 2018)

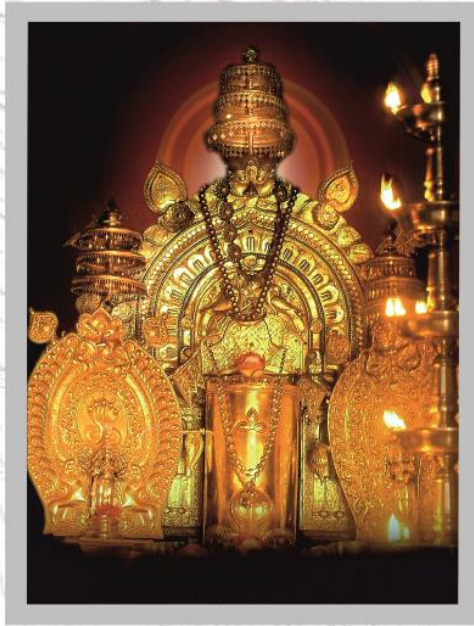
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|| Om Shri Manjunathaya Namaha ||



Shree Kshethra Dharmasthala

Edition Year : 2021-22

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THE LOGO

Poojya Dr D. Veerendra Heggade, Hon'ble Chancellor of the University, while searching for an appropriate Logo for the University, saw a photograph picked from Temple Architecture showing Wings of a Bird, sculpted in Indian style and wanted it to be incorporated in the logo for the University, as the Wings symbolize 'Spreading of Knowledge beyond Boundaries'. Further it was felt that the Central theme of the logo should be 'Rudra' (The Linga) with wings on each side. In this way, the logo of the University was conceptualized.

Hence:

1. The central part represents **Rudra** who Demolishes Darkness.
2. The Three **horizontal lines on The Linga** stand for Samyak Darshan (Right Belief), Samyak Gyan (Right Knowledge) and Samyak Charitra (Right Conduct).
3. The **Wings** symbolize spreading of Knowledge across the boundaries.
4. Base line "**Truth Liberates**" highlights the Purpose of Education: to liberate oneself unconditionally. It shows that it is not discipline, nor knowledge nor the efforts to freedom that liberate but Truth is what liberates you from all your conditioning and ignorance.

The overall significance of Shri Dharmasthala Manjunatheshwara University's Logo is:

Darkness of ignorance is destroyed by the flow of knowledge to bring Liberty to everyone, by realizing the truth. And, it should spread globally without the boundaries as hindrance.



SHRI
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VISION

Shri Dharmasthala Manjunatheshwara University will set the highest standards of teaching and learning by awakening the intelligence of the students and nurturing the creativity hidden in them by creating an environment where the ancient wisdom blends with modern science, to transform them into whole human beings to face the challenges.

MISSION

- ▶ To ensure that the journey of education is inspiring, pleasant and enjoyable.
- ▶ Attract the best of teachers and students.
- ▶ Achieve high principles of trust, love and spirituality in the students.
- ▶ Create a collaborative, diverse and exclusive community.
- ▶ Transform the student of today to be a leader of tomorrow and a better human being.
- ▶ Produce passionate teachers.
- ▶ Evolve innovative teaching techniques.
- ▶ Create a peaceful environment.
- ▶ Prepare the student to face the social challenges.
- ▶ Create a University of which the Nation is proud of.
- ▶ Be an effective partner in Nation Building.
- ▶ Create an Eco-friendly University.
- ▶ Create a University based on the principles of beauty, love and justice.

||Om Shanti! Om Shanti! Om Shanti||



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SDMU/ACAD/BPT/F-4/Notf-223/680/2021

Date:29-12-2021

NOTIFICATION

Ordinance governing Curricula of MPT in Sports and Obstetrics & Gynaecology - 2021

- Ref:
1. Minutes of the 5th Meeting of Academic Council
(Ref. No. SDMU/AC/M5/F-28/626/2021 Dated: 10-12-2021)
 2. Minutes of the 5th Meeting of Board of Studies - Physiotherapy held on 06.07.2021

In exercise of the powers conferred under Statutes 1.4 (Powers and functions - Para ix & x) & 1.8 (Powers and functions - Para i) of Shri Dharmasthala Manjunatheshwara University, the Academic Council has accorded its approval for the notification on the ordinance governing the Curricula of MPT in Sports & MPT in Obstetrics and Gynaecology.

The ordinance shall be effective from the date of notification.

NO

Lt. Col. U. S. Dinesh (Retd.)
REGISTRAR
REGISTRAR,
Shri Dharmasthala Manjunatheshwara
University, Dharwad



To: The Principal, SDM College of Physiotherapy.

Copy for information to:

1. Hon'ble Chancellor, Shri Dharmasthala Manjunatheshwara University, Dharwad
2. Vice Chancellor - Shri Dharmasthala Manjunatheshwara University.
3. Pro Vice-Chancellor (Academics) - Shri Dharmasthala Manjunatheshwara University.
4. Controller of Examinations, Shri Dharmasthala Manjunatheshwara University.
5. Chairperson, Board of Studies - Physiotherapy
6. University Office for Records File
7. Office of the Registrar

Master of Physiotherapy in Sports

COURSE CONTENT

MPT PART I (0-12 Months)

SL NO	SUBJECT CODE	PAPER	SUBJECTS	MARKS
1	MPT1151	I	Physiotherapy Research, Biostatistics, Ethics & Evidence Based Practice	100
2	MPT1152	II	Principles of Physiotherapy Practice and Physiotherapeutics	100
3	MPTF1158	III	Clinical, Physical and Functional Diagnosis in Sports	100

MPT PART II (13-24 Months)

SL NO	SUBJECT CODE	PAPER	SUBJECTS	MARKS
1	MPTS1171	IV	Physiotherapy in Sports	100
2	MPTS1172	V	Recent advances & Evidence Based Practice in Sports	100

COURSE STRUCTURE (in Hours)

MPT I YEAR

EACH SUBJECT	THEORY	PRACTICAL	TOTAL
Physiotherapy Research, Biostatistics, Ethics & Evidence Based Practice	150	50	200
Principles of Physiotherapy Practice and Physiotherapeutics	150	100	250
Clinical, Physical and Functional Diagnosis Sports	150	200	350
Clinical	--	-	1000
Seminar	-	-	150
Journal	-	-	100
			2050

MPT II YEAR

EACH SPECIALITY SUBJECT	THEORY	PRACTICAL	TOTAL
Physiotherapy in Sports	150	250	400
Recent advances & Evidence Based Practice in Sports	150	200	350
Clinical	-	-	1000
Seminar	-	-	150
Journal	-	-	100
Research club	-	-	50
			2050

Participation in departmental activities:

- Journal presentations Minimum 4 in 2 years
- Seminars Minimum 4 in 2 years
- Clinical Presentations Minimum 30 in 2 years
- Special clinics Minimum 20 in 2 years
- Community work /camps/ field visits Minimum 4 in 2 years
- Clinical rounds Minimum 250 in 2 years
- Dissertation work Minimum 200 hours in 2 years
- Technique demonstration Minimum 2 in 2 years
- Participation in conferences/ Optional
Presentation of paper

1ST YEAR MPT COMMON SUBJECTS TO ALL SPECIALITY

TITLE OF THE PAPER I : PHYSIOTHERPAY RESEARCH, BIostatISTICS, ETHICS AND EVIDENCE BASED PRACTICE

Duration : 0 - 12 months

Teaching Scheme

Theory : 150 Hours

Practical : 50 Hours

LEARNING OBJECTIVES

1. Able to undertake independent research in the field of physiotherapy
2. To provide students with detailed training for research theory/philosophy, sampling, research design, Descriptive/inferential statistics, power, error, estimation, reliability, validity, and reading a journal article.
3. Learn Ethical codes of Physiotherapy Practice, its moral & legal aspects.
4. Employ critical thinking, self-reflection, and evidence-based practice to make clinical decisions about physical therapy services Knowledge of various types of study designs and planning for the same

Acquire Professionalism and management skills in planning, implementation and administration in clinical practice (service / self-employment) and academic activities including the skill of documentation and use of information technology in professional practice.

Course Description - Theory

A) PHYSIOTHERAPY RESEARCH

SI No	Content	Hours
1	Introduction to research	01
2	Types of research	02
3	Defining a research question	02
4	Qualitative study designs-Grounded theory and Phenomenological methods.	03
5	Use of Delphi process	02
6	Quantitative study	05
7	Study design types: Case study, Case series, longitudinal cohort, Pre post design, Time series design, Repeated measures design, Randomized control design. Retrospective design, Cross sectional design Sequential clinical design, Experimental design, Superiority trials, Non-inferiority trials	05
8	Sampling design, calculating minimum sample size based on design	06
9	Measurement & scaling techniques.	06
10	Selection criteria for outcome measures in Health Sciences (Physiotherapy and Rehabilitation)	05
11	Research Methods: Designing methodology, Reporting results, Type I and Type II bias.	07
12	Communicating research.	03

B) Evidence Based Practice

SI No	Content	Hours
1	Evaluating published research: Critical appraisal of scientific literature and looking at the evidence	05
2	Introduction to Evidence based Medicine and Evidence based practice, and Evaluating evidence.	04
3	Asking clinical questions and appraising evidence	05
4	Translating of evidence into practice: strategies	02
5	Use of clinical practice guidelines, clinical pathways, clinical prediction rules to inform practice.	02
	Use of Standardized scales and tests in various assessments. Psychometric properties, Interpretation in Physiotherapy practice	05

6	and placebo effect in clinical trials.	
7	Review of scientific methods.	02
8	Evidence Informed Practice	02

C) BIOSTATISTICS

SI No	Content	Hours
1	Introduction to biostatistics.	02
2	Source and presentation of data.	02
3	Measures of location, average and percentile.	02
4	Measures of central tendency, Tests of normality.	02
5	Probability and sampling distributions.	02
6	Variability and its measures.	03
7	Normal distribution and normal curve.	03
8	Measures of population and statistics.	03
9	Measurement: Properties of measurement: reliability, validity, responsiveness, Minimal Clinically Important Difference (MCID).	05
10	Role of Pilot study in research.	02
11	Data analysis: descriptive and inferential statistics, correlations and hypothesis testing.	04
12	Tests of comparison\tests of correlation, Goodness of fit, Chi square test.	04
13	Quantitative data analysis: revision of descriptive and inferential statistics, correlations and hypothesis testing, general linear model, Regression analysis, power and effect.	05
14	Analysis of variance and covariance multivariate designs, nonparametric data analysis and selection of nonparametric tests.	03
15	Epidemiological analysis – odds ratio, risk ratio.	02
16	Qualitative data analysis: major qualitative methodologies, techniques in data collection and analysis.	03
17	Understanding Systematic review and Meta-analysis.	03
18	Role of computers in research -Tabulation using software packages	03
19	Protocol writing, Manuscript writing.	02

D) ETHICS

Sl No	Content	Hours
1	Introduction, History & General Principles of ethics involving human participants	02
2	Ethical consideration in Health Sciences practice (physiotherapy) - State, National & international rules & regulations governing Health Sciences practice (physiotherapy).	02
3	Ethical codes and conduct for Health professional (physiotherapy).	02
4	Informed consent process	02
5	Good clinical practices (GCP)	02
6	Ethical review procedures- protocol writing, ethical committee.	02
7	Influence of values & valuing on patient care	01
8	Ethical issues in practice of Health Science (physiotherapy).	02
9	Leadership, administration, management, and professionalism skills in Health Science (Physiotherapy)	03
10	Scope of consumer protection act in health care	03

Recommended Reading for Physiotherapy Research, Biostatistics, Ethics and Evidence

Based Practice

1. Gabard, D. L., & Martin, M. W. (2010). Physical therapy ethics. FA Davis
2. Carter, R., & Lubinsky, J. (2015). Rehabilitation research: principles and applications. Elsevier Health Sciences.
3. Fethers, L., & Tilson, J. (2018). Evidence based physical therapy. FA Davis.
4. Jewell, D. V. (2017). Guide to evidence-based physical therapist practice. Jones & Bartlett Publishers.
5. Hicks, C. M. (2009). Research methods for clinical therapists: applied project design and analysis. Elsevier Health Sciences.
6. Greenhalgh, T. (2019). How to Read a Paper: The Basics of Evidence-based Medicine and Healthcare. Wiley- Blackwell.
7. Watkins, M. P., & Portney, L. (2009). Foundations of clinical research: applications to practice. Upper Saddle River, NJ: Pearson/Prentice Hall.
8. Evans I, Thornton H, Chalmers I and Glasziou P (2011). Testing Treatments, 2nd Edition; London: Pinter and Martin.

9. Khanal, A. B. (2016). Mahajan's Methods in Biostatistics for Medical Students and Research Workers. Jaypee Brothers Medical P.
10. Kuzma, J. W., & Bohnenblust, S. E. (2004). Basic statistics for the health sciences. (5th ed.). Boston: McGraw Hill.
11. Munro, B. H. (1997). Statistical methods for health care research (3rd ed.). Philadelphia: Lippincott.
12. Jenkins, S., Price CJ, & Straker L. (1998). The researching therapist. A practical guide to planning, performing and communicating research. Edinburgh: Churchill Livingstone.
13. Kettenbach, G., & Schlomer, S. L. (2016). Writing patient/client notes: ensuring accuracy in documentation. FA Davis.
14. Swisher, L. L. D., & Page, C. G. (2005). Professionalism in physical therapy: History, practice, and development. Elsevier Health Sciences.
15. Metcalf, V. A. (1983). Physical Therapy Administration and Management.
16. Kothari, C. R. (2004). Research methodology: Methods and techniques.
17. Kaushal AK. Medical negligence and legal remedies with special reference to the consumer protection law. New Delhi Universal Book Traders, 1995. p. 23-24.
18. Stokes, E. K. (2011). Rehabilitation outcome measures (pp. 27-32). Edinburgh: Churchill Livingstone.
19. Hack, L. M., & Gwyer, J. (2013). Evidence into Practice: Integrating Judgment, Values and Research. FA Davis.
20. <https://www.icmr.nic.in/guidelines>

1ST YEAR MPT COMMON SUBJECTS TO ALL SPECIALITY
TITLE OF THE PAPER II : PRINCIPLES OF PHYSIOTHERAPY PRACTICE AND
PHYSIOTHERAPEUTICS

Duration : 0 - 12 months

Teaching Scheme

Theory: 150 Hrs

Practical: 100 Hrs

LEARNING OBJECTIVES

1. Able to execute all routine physiotherapeutic procedures with evidence based practice Able to be a prominent member of the multidisciplinary physiotherapy team and treat all the conditions
2. which need physiotherapeutic procedures
3. Able to provide adequate knowledge about the treatment procedures and benefit.
4. Learn multidisciplinary practice skills
5. Able to practice and assess patient independently.

Course Description- Theory

SI No	Content	Hours
1	Anatomy and physiology of peripheral nerve, muscle and neuromuscular junction.	02
2	Electrical properties of muscle and nerve.	02
3	Basic concepts in biomechanics	02
4	Biomechanics of bone, cartilage, tendon & ligaments, muscles	03
5	Biomechanics & Pathomechanics of respiration and circulation.	02
6	Biomechanics & Pathomechanics of integrated function- Gait, Posture, Spine, Peripheral Joints, Activities of daily living, Hand function.	10
7	Instrumentation for neuromuscular electrical stimulation	02
8	Muscles plasticity in response to electrical stimulation.	02
9	Electrical stimulation and its effects on various systems.	02
10	Sources of Energy, Energy Transfer and Energy Expenditure at rest and various physical activities.	02

11	Responses and Adaptations of various systems to different types of Exercise and training.	03
12	Environmental influence on Performance.	02
13	Body consumption, nutrition and caloric balance and performance.	02
14	Considerations of age and gender in exercise and training.	04
15	Fatigue classification, assessment, management and scientific organization of work-rest regime to control fatigue.	04
16	Energy consumption MET value of various exercises and activity.	02
17	Role of nutrition and diet in physiotherapy.	05
18	History taking, assessment tests, Patient Communication, documentation of findings, treatment planning and organization.	05
19	Documentation of rehabilitation assessment and management using International Classification of Functioning Disability and Health(ICF)	04
20	Pain -modulation and management of pain	05
21	Women`s Health and physiotherapy.	05
22	Geriatric Rehabilitation & theories of aging.	05
23	Exercise planning and prescription for health and fitness with special emphasis to Musculoskeletal pain, Cardiovascular disease, Pregnancy, Postpartum, Obesity, Hypertension and Diabetes.	10
24	Neurological approaches used in Rehabilitation to include theories of motor control and motor	04
25	EMG,NCV, Biofeedback methods and usage	08
26	Manual therapy–different schools of thought– Principle sand techniques.	05
27	General Guidelines in Cardiac Rehabilitation, Pulmonary Rehabilitation	05
28	Burns Rehabilitation and Cancer Rehabilitation Protocol management.	04
29	Integumentary/Wound Management	04
30	CPR, monitoring systems and defibrillators and artificial respirators.	02
31	Sensory and Motor Re-education	02
32	Principles of Paediatric Physiotherapy, approaches and management.	05
33	Musculoskeletal Physiotherapy-guidelines in trauma care, soft tissue injury and rheumatology care	05
34	Physiotherapy in Psychiatric conditions.	02

35	<p>Yoga</p> <p>a. Concept of Yogic Practices– Kinds of Yogic Practices, Asana, Pranayama.</p> <p>b. Asana: Definition, Scope and Limitations of Asanas– Classification of Asanas–Safety Measures and Precautions while performing Asanas</p> <p>c. Pranayama: Meaning –Different Phases in Pranayama Practice Safety Measures and Precautions.</p>	05
36	<p>Ergonomics:</p> <p>a. Introduction, History</p> <p>b. Job/ task/ site Analysis</p> <p>c. Work hardening & conditioning program</p> <p>d. Work related injuries educational programmes for prevention of work related injuries</p>	03
37	Recovery of function, Neural plasticity & neural control of locomotion	02
38	Principles of sports injury, prevention and management	05
39	Bladder & bowel management.	02
40	Amputations -Assessment and Management	02

Recommended Reading for Principles of Physiotherapy Practice and Physiotherapeutics

1. O'Sullivan, S. B., Schmitz, T. J., & Fulk, G. (2019). Physical rehabilitation. FA Davis
2. Cifu, D. X. (2015). Braddom's physical medicine and rehabilitation. Elsevier Health Sciences.
3. Houglum, P. A., & Bertoti, D. B. (2011). Brunnstrom's clinical kinesiology. FA Davis.
4. Augustine, J. R. (2008). Human neuroanatomy. Academic Press.
5. Lusardi, M. M., Jorge, M., & Nielsen, C. C. (2013). Orthotics and prosthetics in rehabilitation. Elsevier Health Sciences.
6. David, J., MAGEE, M., & ROBERT, C. (2020). ORTHOPEDIC PHYSICAL ASSESSMENT. Saunders.
7. Kisner, C., Colby, L. A., & Borstad, J. (2017). Therapeutic exercise: Foundations and techniques. Fa Davis.
8. Goodman, C. C., Heick, J., & Lazaro, R. T. (2017). Differential Diagnosis for Physical Therapists-E-Book: Screening for Referral. Elsevier Health Sciences.
9. Neumann, D. A. (2013). Kinesiology of the musculoskeletal system-e-book: foundations for rehabilitation. Elsevier Health Sciences.
10. American College of Sports Medicine, Riebe, D., Ehrman, J. K., Liguori, G., & Magal, M. (2018). ACSM's guidelines for exercise testing and prescription. Wolters Kluwer.
11. Loudon, J. K., Manske, R. C., & Reiman, M. P. (2018). Clinical mechanics and kinesiology. Human Kinetics.
12. Martin, S. T., & Kessler, M. (2015). Neurologic interventions for physical therapy. Elsevier Health Sciences.
13. Donatelli, R. A., & Wooden, M. J. (2009). Orthopaedic Physical Therapy-E-Book. Elsevier health sciences.
14. Cameron, M. H. (2017). Physical Agents in Rehabilitation-E Book: An Evidence-Based Approach to Practice. Elsevier Health Sciences.
15. Avers, D., & Brown, M. (2018). Daniels and Worthingham's Muscle Testing: Techniques of Manual Examination and Performance Testing. Elsevier Health Sciences.
16. Kimura, J. (2001). Electrodiagnosis in diseases of nerve and muscle: principles and practice. Oxford university press.
17. Lee, H. J., & DeLisa, J. A. (2005). Manual of nerve conduction study and surface anatomy for needle electromyography. Lippincott Williams & Wilkins.
18. Stokes, E. K. (2011). Rehabilitation outcome measures (pp. 27-32). Edinburgh: Churchill Livingstone.

19. Shumway-Cook, A., & Wollacott, M. (2016). Motor control: translating research to practice.
20. McKinnis, L. N. (2013). Fundamentals of musculoskeletal imaging. FA Davis.
21. Hillegass, E. (2016). Essentials of cardiopulmonary physical therapy. Elsevier Health Sciences.
22. Fettes, L., & Tilson, J. (2018). Evidence based physical therapy. FA Davis.
23. Goodman, C. C., & Fuller, K. S. (2014). Pathology: implications for the physical therapist. Elsevier Health Sciences.
24. Cifu, D. X. (2015). Braddom's physical medicine and rehabilitation. Elsevier Health Sciences.
25. Kenney, W. L., Wilmore, J. H., & Costill, D. L. (2018). Physiology of sport and exercise. Human kinetics.
26. Park, J. W., & Jung, D. I. (Eds.). (2016). Integumentary Physical Therapy. Springer.
27. Sandrini, G., Homberg, V., Saltuari, L., Smania, N., & Pedrocchi, A. (Eds.). (2018). Advanced Technologies for the Rehabilitation of Gait and Balance Disorders (Vol. 19). Springer.
28. Hillegass, E. (2016). Essentials of cardiopulmonary physical therapy. Elsevier Health Sciences.
29. Nair, K. P. S., González-Fernández, M., & Panicker, J. N. (Eds.). (2018). Neurorehabilitation Therapy and Therapeutics. Cambridge University Press.
30. Brukner, P. (2017). Brukner & Khan's Clinical Sports Medicine. McGraw-Hill Education.
31. Herzog, W. (Ed.). (2000). Clinical biomechanics of spinal manipulation. Churchill Livingstone
32. SandyFritz, KathleenPaholskyandM. JanesGrosenbach-BasicSciencefor soft tissueandmovementtherapies.
33. Saunders, R., Astifidis, R., Burke, S. L., Higgins, J., & McClinton, M. A. (2015). Hand and upper extremity rehabilitation-e-book: a practical guide. Elsevier Health Sciences.
34. Jean M Irion, Glenn L Irion. Women's Health in Physical Therapy: Principle and Practices for Rehab Professionals (Point (Lippincott Williams & Wilkins)) 1st Edition
35. Swami Satyananda Saraswati, asana Pranayama mudra bandha, Yoga Publications Trust, Ganga Darshan, Munger, Bihar, India. Fourth (revised) edition, 2008
36. Malhotra, A. K. (2017). An Introduction to Yoga Philosophy: an annotated translation of the Yoga Sutras. Routledge
37. Brukner, P. (2017). Brukner & Khan's Clinical Sports Medicine. McGraw-Hill Education.

38. Goodman, C. C., & Snyder, T. E. K. (2000). *Differential diagnosis in physical therapy*. Philadelphia, PA: Saunders.
39. Poduri, K. R. (2017). *Geriatric Rehabilitation: From Bedside to Curbside*. CRC Press.
40. Long, T. (2018). *Handbook of pediatric physical therapy*. Lippincott Williams & Wilkins.
41. Tecklin, J. S. (Ed.). (2008). *Pediatric physical therapy*. Lippincott Williams & Wilkins.
42. Stokes, M., & Stack, E. (Eds.). (2011). *Physical Management for Neurological Conditions E-Book:[Formerly Physical Management in Neurological Rehabilitation E-Book]*. Elsevier Health Sciences.
43. Martin, S. T., & Kessler, M. (2015). *Neurologic interventions for physical therapy*. Elsevier Health Sciences.
44. Shamus, E., Stern, D. F., & Stern, D. F. (2011). *Effective documentation for physical therapy professionals*. McGraw-Hill Medical.
45. Jacobs, K. (Ed.). (2008). *Ergonomics for therapists*. Elsevier Health sciences.

TITLE OF THE PAPER III
CLINICAL, PHYSICAL AND FUNCTIONAL DIAGNOSIS IN SPORTS

Duration : 0 - 12 months

Teaching Scheme

Theory : 150 Hours

Practical : 200 Hours

LEARNING OBJECTIVES

1. Able to execute all routine physiotherapeutic assessment and outcomes with evidence based practice in sports.
2. Able to practice and assess patient independently.
3. Be able to impart knowledge and train the undergraduates.

Course Description - Theory

SI No	Content	Hours
1.	Types of sports injuries and classification of sports injuries, risk factors for sports injuries	5
2.	Physiotherapy evaluation of various Sports Injury : HOPS, SOAP, History of the injury, observation and inspection of injured site, physical examination tests, functional tests, special tests, neurologic testing, activity specific functional testing condition	5
3.	Differential diagnosis in Sports conditions.	10
4.	Pain science Approaches in physiotherapy <ul style="list-style-type: none"> • Definitions of pain, Types of pain, Identification of risk factors for chronicity • Biomedical and Biopsychosocial model , Fear avoidance model, Pain catastrophizing • Pain mechanisms and contributors, theory of modulation of pain, and integration of the pain sciences into clinical reasoning models • Pain measurement tools/scales, Pain Self-efficacy e. Motor control: • Peripheral and spinal pain. • Evaluation and assessment of Pain, Psychosocial effects and illness behavior of chronic pain. 	10

5.	<p>Biomechanics of sporting activities</p> <ul style="list-style-type: none"> • Biomechanical and Pathomechanical assessment of peripheral and spinal joints and Combined Movements of spine • properties of soft tissues, joints, • Biomechanics of different activities of sports and their injury mechanics 	15
6.	Neurodynamic assessment, diagnosis and neurodynamic tests	03
7.	Clinical electrophysiological testing	05
8.	<p>Sports Psychology</p> <ul style="list-style-type: none"> • Role of Sports Psychologist • Predictive models of Injury • Psychological factors involved in performance • Treatment for injury and pain • Injury prone profile • Crisis intervention • Techniques of relaxation 	9
9	<p>Evaluation of athlete / Sports person: Evaluation for injury prevention, Pre participation, after injury and during rehabilitation:</p> <ul style="list-style-type: none"> • Examination format, timing of examination and frequency of examination, medical history, physical evaluation, clearance for participation • Outcome measures used in Sports injury assessment and management 	10
10	Principles of pathological investigations and Diagnostic imaging techniques with interpretation of sports injuries	05
11.	<ul style="list-style-type: none"> • Integumentary system : classification of skin injuries • Soft tissue injury and healing: muscles, tendons, ligaments, fascia, and neurovascular structures • Wound assessment 	05
12.	Assessment, Clinical examination of movement dysfunction and Muscle imbalances.	03
13.	Assessment of female athlete, menstrual synchrony, exercise and pregnancy	05
14.	Anthropometric measurements, Body composition and weight control	04
15.	<p>Sports specific fitness assessment:</p> <ul style="list-style-type: none"> • Range of motion • Muscle strength, endurance, flexibility and Skills. Agility, 	

	<p>balance and coordination tests.</p> <ul style="list-style-type: none"> • Body composition • Cardiac efficiency tests, exercise ECG testing, pulmonary function tests and spirometer • Fitness testing for -Paediatrics, women, geriatrics population 	20
16.	Evaluation of different types of fatigue and DOMS	02
17.	Gait analysis and diagnosis.	05
18.	Manual therapy :Schools of thought of various concepts of Manual Therapy - principles & philosophies, Indications, contraindications, methods of assessment and diagnosis of joint and soft tissue dysfunction	03
19.	Screening and assessment of concussion, contusion and laceration	05
20.	Energy transfer for physical activity	04
21.	Isokinetic testing,	03
22.	<p>Exercise Physiology :</p> <ul style="list-style-type: none"> • Basic energy system and metabolism, adaptation to aerobic and anaerobic training. • Thermoregulation <p>Training Environment:</p> <p>Exercise in hypo, hyperbaric, and microgravity</p> <ul style="list-style-type: none"> • Fatigue and over training 	10
23.	Assessment , Evaluation of Balance and Proprioception	04

BRANCH: MASTER OF PHYSIOTHERAPY IN SPORT		
TITLE OF THE PAPER IV: PHYSIOTHERAPY IN SPORTS		
Duration : 13 - 24 months Teaching Scheme Theory : 150 Hours Practical : 250 Hours		
LEARNING OBJECTIVES		
<ol style="list-style-type: none"> 1 Able to perform independent physiotherapy assessment and treatment for patients. 2 Able to execute all routine physiotherapeutic procedures with evidence based practice in musculoskeletal sciences and sports 3 Able to provide adequate knowledge about the treatment procedures and benefit. 4 Able to practice and assess patient independently. 5 Provide students with detailed physiotherapy training in orthopaedic, manual therapy, musculoskeletal sciences, and sports 6 Acquire the knowledge and skill of various approaches of Manual therapy, neural mobilization, soft tissue techniques, and patient education. 7 Be able to impart knowledge and train the undergraduates. 		
Course Description - Theory		
SNo	Content	Hours
1.	Injury Prevention, Principles, factors and management, <ul style="list-style-type: none"> • Warm up exercises and its effects on in injury prevention, types, and implementation • Conditioning programs for injury prevention Flexibility training <ul style="list-style-type: none"> • Aids, braces and Taping in injury prevention • Equipment in sports for head, neck, upper limb, lower limb, abdominal and spine, types of materials used, helmets etc • Acute and chronic soft tissue injury management. 	12
2.	Therapeutic exercises - Strength training, power training, Flexibility training, Endurance training, Plyometrics, Reaction training, Proprioceptive training, Stretching, Sports specific training. & Cross training.	10
3.	Physiotherapy management of Fibromyalgia, Complex regional pain syndrome, Myofascial pain, Degloving injuries, Burns, Cumulative Traumatic Disorders, Brachial plexus and other peripheral nerve injury.	06

4.	<p>Pain science Approaches in physiotherapy and management</p> <ul style="list-style-type: none"> • Current models for the clinical management of pain, • Pain management strategies in physiotherapy, Multidisciplinary pain management approaches, Therapeutic Neuroscience Education, Cognitive behavioral therapy. • Biopsychosocial approaches into physiotherapy management. 	05
5.	<p>Advances in functional diagnostic procedures & various outcome measures relevant to sports injuries.- Xray,MRI,CT,FMRI,US and Biomarkers.</p>	06
6.	<p>Sports Nutrition</p> <ul style="list-style-type: none"> • Energy requirement : Carbohydrates, Protein and Fat • Metabolic Mill, Energy requirement. • Glycemic Index. • Pre & post exercise carbohydrate intake. • Protein requirement and needs of athletes • Fats requirement and needs of athlete - • Water and electrolyte loss and replacement in exercise • Vitamins athlete’s needs, megavitamin & antioxidants • Nutritional ergogenic aids and supplements • Pre competition meal and carbohydrate loading. • Sports specific nutrition: sprinting, distance running. • Diet plan : before, during and after exercise/ event • Effect of eating disorders in athlete 	12
7.	<p>Emergency medical care and onsite assessment and management Evaluation, moving the injured participant, diagnostic testing Emergency care and athletic first aid,</p> <ul style="list-style-type: none"> • Interpreting ECG • CPR • Shock management, internal and external bleeding, • Splinting, stretcher use, handling and transfers • Drowning 	10
8.	<p>Sports Injuries of Upper Limb, Head and Neck: Assessment and management</p> <ul style="list-style-type: none"> • Common Injuries to the head, neck, shoulder, upper arm, 	10

	elbow, wrist, hand and finger, <ul style="list-style-type: none"> • Assessment and Management of specific injuries and Specific protocols for rehabilitation 	
9.	Sports Injuries of Lower Limb,abdominal and Spine: Assessment and management <ul style="list-style-type: none"> • Common injuries of spine, pelvis and lower limb. • Assessment and Management of specific injuries and Specific protocols for rehabilitation. 	10
10.	Sports in Pediatrics ; Assessment, training and management: <ul style="list-style-type: none"> • Introduction: bone growth, Training Guidelines, Nutrition • Common sports injury assessment and management 	06
11.	Sports in Geriatrics: : Assessment, training and management <ul style="list-style-type: none"> • Training guidelines in geriatric population • Training to maintain fitness - general exercise prescription • Age related changes 	05
12.	Sports for Para athlete: Assessment, training and management <ul style="list-style-type: none"> • Screening for participation and prevention of injuries • Para athletics: classification and categories • Rehabilitation for injuries in Para athletes 	05
13.	Sports in women: : Assessment, training and management <ul style="list-style-type: none"> • Gender differences in sports participation • Effects of exercise on menstrual cycle and performance, menstrual dysfunction • Exercise and pregnancy, lactation, menopause • Osteoporosis and prevention • Common injuries in women • Care of breast 	06
14.	Pre and Post-operative Rehabilitation following sports injuries	10
15.	Ethic in sports	03
16.	Medico-Legal Issues in sports: <ul style="list-style-type: none"> • Negligence, Liability, Litigation • Basic principles to reduce the threat of litigation • Assumption of risk • Contributing negligence • Comparative negligence • Legal rights of disabled athletes 	09
17.	Multi disciplinary approach in sports training and injuries	06

18.	Protective equipments: Protective & supportive equipment in sports, Protective taping and wrapping.	02
19.	Return to play in sports and performance enhancement	02
20.	Physiotherapy management in wound and oedema	02
21.	Equipment's in sports physiotherapy: Isokinetic, EMG and Biofeedback, Proprioception assessment equipment, Gait analyzers.	05
22.	Exercise planning and Exercise Prescription	02
23.	Aquatic rehabilitation	02
24.	Sports Psychology, Sports diet, Sports pharmacology, banned drugs, drug testing, guide to banned medications. <ul style="list-style-type: none"> • Performance enhancing drugs, • Doping:, Types of drugs and role of World anti-doping agency and National Anti-doping agency • Therapeutics drugs: analgesics and anti-inflammatory, etc 	05
25.	Manual therapy and neural Mobilization : Assessment and management <ul style="list-style-type: none"> • Neurodynamics and neural tissue mobilization. • Mulligan--principles of assessment and treatment using mulligan concept. NAGS ,SNAGS ,RNAGS ,MWM, application in spinal and peripheral joint dysfunction • Maitland-Principles and application in spinal and peripheral joint dysfunction • Kaltenborn - Principles and application in spinal and peripheral joint dysfunction • Cyriax - history ,physical examination-selective tissue tension test, management • strategies in spinal and peripheral joint and soft tissue techniques - deep transverse friction massage ,massage ,manipulation , injection • McKenzie-- classification of spinal pain as adopted by McKenzie-postural, dysfunction and derangement -assessment and treatment procedures • Pilates school of thought, principles, indications, contraindications and techniques. • Mennel's technique 	20
26.	Myofascial Release technique-fibromyalgia, trigger point therapy principles of assessment and treatment	02
27.	Positional release technique--assessment and treatment	02

	procedures strain and counter strain technique - Functional technique	
28.	Muscle Energy Technique--theories of spinal and peripheral joint dysfunction - Fryette's laws of physiological spinal motion - segmental vertebral dysfunction - Neutral Rotation and Side Flexion (NRS), Flexion Rotation & side flexion (ERS), Flexion Rotation & side flexion (FRS) - screening examination, scanning examination, skill rolling, segmental definition (diagnosis), treatment using MET	03
29.	Therapeutic modalities : electrotherapy and Biofeed back	05

BRANCH: MASTER OF PHYSIOTHERAPY IN SPORTS

**TITLE OF THE PAPER V :
RECENT ADVANCES AND EVIDENCE BASED PRACTICE IN SPORTS**

Duration : 13 - 24 months

Teaching Scheme

Theory : 150 Hours

Practical : 200 Hours

LEARNING OBJECTIVES

- 1 Employ critical thinking, self-reflection, and evidence-based practice to make clinical decisions about physical therapy services
- 2 Collect and critically evaluate data and published literature to apply in the delivery of care, practice management, and to examine the theoretical and scientific basis for Musculoskeletal disorders and Sports physiotherapy

Course Description -		
Sl No	Content	Hours
1.	Identification and critical appraisal of literature related to sports physiotherapy practice: <ul style="list-style-type: none"> Identifying the strength and weakness in available evidence Identifying the areas where there is lack of evidence to support existing practice, approaches or interventions. 	10
2.	Evidence Based physiotherapy (EBP) for clinical assessment of sports injuries	05
3.	EBP for screening of sports injuries	06
4.	EBP for management of sports injuries	06
5.	Recent advances, current trends and guidelines for specific Sport injury assessment , screening, diagnosis and management	05
6.	Recent advances & controversies in manual therapy and grey areas of research following sports injuries.	05
7.	EBP and recent advances in assessment and management of pain in	05
8.	Recent advances, current trends and guidelines for prevention strategies for sports injuries and enhance performance.	10
9.	EBP, Recent advances, current trends and guidelines and criteria for return to sports activities	10
10.	Recent Advances and Controversies in Electrotherapy and	05
11.	Current trends and Recent advances in Kinematic & kinetic analysis	05
12.	Current trends and EBP in Protective equipment: Protective & supportive equipment in sports, taping and wrapping	05
13.	Evidence Based physiotherapy in sports Pharmacology	05
14.	Current trends in women sports injuries assessment and management	05
15.	Current trends and Recent advances in pediatric sports injuries assessment and management	05
16.	EBP in Rehabilitation of pediatric sports injuries	06
17.	EBP, and recent advances in Geriatric sports injuries assessment and management	06
18.	EBP in Rehabilitation of women and geriatric sports injuries	06
19.	EBP and recent advances in exercise testing and exercise	06
20.	EBP and current trends in Therapeutic exercises	06
21.	EBP in sports nutrition and diet	06

22.	Recent advances in Outcome measures used sports injury and	06
23.	Current trends in management of Integumentary impairments due to Sports disorders	06
24.	Current trends in emergency care for sports injuries assessment and management	10

Recommended Reading for Master of Physiotherapy in Musculoskeletal disorders and Sports (All 3 specialty papers)

1. ACSM guideline for exercise testing and prescription, 11th edition
2. Anderson K Marcia, Hall J Susan: Sports injury Management (2018): lippincott williams and wilkins.
3. Adriaan Louw, Emilio Puentedura, Steve Schmidt and Kory Zimney. Pain Neuroscience Education: Teaching People About Pain(2nd edition)
4. David, J., MAGEE, M., & ROBERT, C. (2020). ORTHOPEDIC PHYSICAL ASSESSMENT. Saunders.
5. Mosley, G. L., & Butler, D. S. (2017). Explain pain supercharged. NOI.
6. Moseley, G. L. (2012). The graded motor imagery handbook. Noigroup publications.
7. Cook, C. (2012). Orthopedic Manual Therapy An Evidence-Based Approach
8. Cook, C. (2012) Orthopedic Physical Examination Tests: An Evidence-Based Approach (2nd Edition)
9. O'Sullivan, S. B., Schmitz, T. J., & Fulk, G. (2019). Physical rehabilitation. FA Davis.
10. Magee, D. J., Zachazewski, J. E., Quillen, W. S., & Manske, R. C. (2015). Pathology and intervention in musculoskeletal rehabilitation (Vol. 3). Elsevier Health Sciences.
11. Diane Jacobs, (2016)Dermo Neuro Modulating: Manual Treatment for Peripheral Nerves and Especially Cutaneous Nerves
12. Todd Hargrove,(2014),A Guide to Better Movement: The Science and Practice of Moving with More Skill and Less Pain.
13. Gifford, L. (2014). Aches and pains. CNS Press (three-book set)
14. Kisner, C., Colby, L. A., & Borstad, J. (2017). Therapeutic exercise: Foundations and techniques. Fa Davis.
15. Goodman, C. C., Heick, J., & Lazaro, R. T. (2017). Differential Diagnosis for Physical Therapists-E-Book: Screening for Referral. Elsevier Health Sciences.
16. Neumann, D. A. (2013). Kinesiology of the musculoskeletal system-e-book: foundations for rehabilitation. Elsevier Health Sciences.
17. American College of Sports Medicine, Riebe, D., Ehrman, J. K., Liguori, G., & Magal, M. (2018). ACSM's guidelines for exercise testing and prescription.

Wolters Kluwer.

18. Loudon, J. K., Manske, R. C., & Reiman, M. P. (2018). Clinical mechanics and kinesiology. Human Kinetics.
19. Martin, S. T., & Kessler, M. (2015). Neurologic interventions for physical therapy. Elsevier Health Sciences.
20. Cameron, M. H. (2017). Physical Agents in Rehabilitation-E Book: An Evidence-Based Approach to Practice. Elsevier Health Sciences.
21. Hing, W., Hall, T., Rivett, D. A., Vicenzino, B., & Mulligan, B. (2015). The mulligan concept of manual therapy: textbook of techniques. Elsevier Health Sciences.
22. Edmond, S. L. (2016). Joint Mobilization/Manipulation-E-Book: Extremity and Spinal Techniques. Elsevier Health Sciences.
23. J H Cyriax MD MRCP and P J Cyriax MCSP (1993) Cyriax's Illustrated Manual of Orthopaedic Medicine Butterworth-Heinemann Ltd, Oxford (2nd edition), 1993
24. Avers, D., & Brown, M. (2018). Daniels and Worthingham's Muscle Testing: Techniques of Manual Examination and Performance Testing. Elsevier Health Sciences.
25. Jones, M. A., & Rivett, D. A. (2018). Clinical Reasoning in Musculoskeletal Practice. Elsevier Health Sciences.
26. Manske, R. C. (2015). Fundamental orthopedic management for the physical therapist assistant. Elsevier Health Sciences.
27. Shumway-Cook, A., & Wollacott, M. (2016). Motor control: translating research to practice.
28. McKinnis, L. N. (2013). Fundamentals of musculoskeletal imaging. FA Davis.
29. Hillegass, E. (2016). Essentials of cardiopulmonary physical therapy. Elsevier Health Sciences.
30. Fatters, L., & Tilson, J. (2018). Evidence based physical therapy. FA Davis.
31. Goodman, C. C., & Fuller, K. S. (2014). Pathology: implications for the physical therapist. Elsevier Health Sciences.
32. Cifu, D. X. (2015). Braddom's physical medicine and rehabilitation. Elsevier Health Sciences.
33. Twomey, L. T. (2004). Grieve's modern manual therapy.
34. Lee, D. G. (2011). The Pelvic Girdle E-Book: An integration of clinical expertise and research. Elsevier Health Sciences.
35. Stokes, E. K. (2011). Rehabilitation outcome measures (pp. 27-32). Edinburgh: Churchill Livingstone.
36. Brukner, P. (2017). Brukner & Khan's Clinical Sports Medicine. McGraw-Hill Education.
37. Herzog, W. (Ed.). (2000). Clinical biomechanics of spinal manipulation. Churchill Livingstone

38. SandyFritz,KathleenPaholskyandM.JanesGrosenbach-BasicSciencefor softtissueandmovementtherapies.
39. Manheim, C. J. (2008). The myofascial release manual. Slack Incorporated
40. Hengeveld, E., & Banks, K. (Eds.). (2013). Maitland's vertebral manipulation: management of neuromusculoskeletal disorders (Vol. 1). Elsevier Health Sciences.
41. Maitland, G. D. (2013). Vertebral manipulation. Butterworth-Heinemann.
42. Maitland, G., Hengeveld, E., Banks, K., & English, K. (2005). Maitland's Peripheral Manipulation.
43. McKenzie, R. (1990). The cervical and thoracic spine: mechanical diagnosis and therapy. Orthopedic Physical Therapy.
44. McKenzie, R., & May, S. (2003). The lumbar spine: mechanical diagnosis and therapy (Vol. 1). Orthopedic Physical Therapy.
45. Lyn Paul Taylor (1990) Taylor's manual of physical evaluation and treatment
46. Deig, D. (2001). Positional release technique: from a dynamic systems perspective. Butterworth-Heinemann.
47. Chaitow, L., & Crenshaw, K. (2006). Muscle energy techniques. Elsevier Health Sciences.
48. Reid, D. C. (1993). Sports injury, assessment and rehabilitation. *Medicine & Science in Sports & Exercise*, 25(10), i
49. Hoppenfeld, S., & Murthy, V. L. (Eds.). (2000). Treatment and rehabilitation of fractures. Lippincott Williams & Wilkins.
50. Norris, C. M. (2004). Sports injuries: Diagnosis and management. Butterworth-Heinemann
51. Christopher M.. Norris. (1993). Sports injuries: Diagnosis and management for physiotherapists. Butterworth-Heinemann
52. McGinnis, P. M. (2013). Biomechanics of sport and exercise. Human Kinetics.
53. Kandel,E.R.,Schwartz,J.H., & Jessell,T.M.(2000).Principlesofneuralscience (4thed.). USA:McGraw-Hill.
54. Greenman,P.E.(2003).Principlesofmanualmedicine(3rded.).Philadelphia: LippincottWilliams&Wilkins.
55. Wilson,A.(2002).Effectivemanagementofmusculoskeletalinjury:Aclinical ergonomicsapproachtoprevention.ChurchillLivingstone.
56. Ebnezar, J. (2003). Essentials of orthopaedics for physiotherapist. JAYPEE BROTHERS PUBLISHERS.
57. Nordin, M., & Frankel, V. H. (Eds.). (2001). Basic biomechanics of the musculoskeletal system. Lippincott Williams & Wilkins.
58. Bulstrode, C., Buckwalter, J., Carr, A., Marsh, L., Fairbank, J., Wilson-Macdonald, J., & Bowden, G. (2002). Oxford Textbook of Orthopedics and

Trauma Volume Two. Oxford University Press.

59. Day, R. J., & Fox, J. E. (2009). A physiotherapist's guide to clinical measurement.
60. Azar, F. M., Canale, S. T., & Beaty, J. H. (2016). Campbell's operative orthopaedics e-book. Elsevier Health Sciences.
61. Swain, J., Bush, K. W., & Brosing, J. (2008). Diagnostic Imaging for Physical Therapists-E-Book. Elsevier Health Sciences
62. Chaitow, L., & DeLany, J. (2011). Clinical Application of Neuromuscular Techniques, Volume 2 E-Book: The Lower Body. Elsevier Health Sciences.
63. Delany, J., & Chaitow, L. (2000). Clinical Applications of Neuromuscular Technique.
64. Gibbons, J. (2011). Muscle energy techniques: A practical guide for physical therapists. Lotus Publishing.
65. Hammer, Warren I., ed. Functional soft-tissue examination and treatment by manual methods. Jones & Bartlett Learning, 2007.
66. Gibbons, P., & Tehan, P. (2016). Manipulation of the Spine, Thorax and Pelvis: with access to [www. spinethoraxpelvis. com](http://www.spinethoraxpelvis.com). Elsevier Health Sciences.
67. Park, J. W., & Jung, D. I. (Eds.). (2016). Integumentary Physical Therapy. Springer.
68. Kenney, W. L., Wilmore, J. H., & Costill, D. L. (2018). Physiology of sport and exercise. Human kinetics.
69. Kimura, J. (2001). Electrodiagnosis in diseases of nerve and muscle: principles and practice. Oxford university press.
70. Lee, H. J., & DeLisa, J. A. (2005). Manual of nerve conduction study and surface anatomy for needle electromyography. Lippincott Williams & Wilkins.
71. Sandrini, G., Homberg, V., Saltuari, L., Smania, N., & Pedrocchi, A. (Eds.). (2018). Advanced Technologies for the Rehabilitation of Gait and Balance Disorders (Vol. 19). Springer.
72. Saunders, R., Astifidis, R., Burke, S. L., Higgins, J., & McClinton, M. A. (2015). Hand and upper extremity rehabilitation-e-book: a practical guide. Elsevier Health Sciences.
73. James E. Zachazewski PT DPT SCS ATC, David J. Magee PhD BPT (Author), William S. Quillen PT PhD SCS FACSM: Athletic Injuries and Rehabilitation: Saunders (24 April 1996).
74. James G. Garrick MD. David R. Webb MD (Author) Sports Injuries: Diagnosis and Management. Saunders 1990.
75. James Andrews Gary Harrelson Kevin Wilk: Physical Rehabilitation of the Injured Athlete, 2nd Ed: Saunders 2012.
76. Lars Peterson, Per A.F.H. Renstrom: Sports Injuries: Prevention, Treatment and Rehabilitation, 4th edition 2016: CRC press.

Recommended journals:

- 1 Physiotherapy: Theory and Practice
- 2 PAIN
- 3 Musculoskeletal Science and Practice
- 4 Neurorehabilitation and neural repair
- 5 Journal of orthopaedic and sports physical therapy
- 6 Journal of head trauma rehabilitation
- 7 Manual therapy
- 8 Archives of physical medicine and rehabilitation
- 9 Supportive care in cancer
- 10 Physical therapy
- 11 Journal of electromyography and kinesiology
- 12 Journal of rehabilitation medicine
- 13 Clinical rehabilitation
- 14 Australian journal of physiotherapy
- 15 American journal of physical medicine & rehabilitation
- 16 Disability and rehabilitation
- 17 Brain injury
- 18 Journal of rehabilitation research and development
- 19 Topics in stroke rehabilitation
- 20 European journal of cancer care
- 21 Journal of manipulative and physiological therapeutics
- 22 Developmental neurorehabilitation
- 23 Physiotherapy
- 24 Physical therapy in sport
- 25 Journal of hand therapy
- 26 Prosthetics and orthotics international
- 27 Journal of sport rehabilitation
- 28 Disability and rehabilitation
- 29 European journal of physical and rehabilitation medicine
- 30 Journal of musculoskeletal pain
- 31 Journal of physical therapy science
- 32 Journal of back and musculoskeletal rehabilitation

- 33 Journal of neurologic physical therapy
- 34 Physical Medicine and Rehabilitation PM&R
- 35 Journal of Bodywork and Movement Therapies
- 36 Journal of Advanced Research
- 37 Burns Open
- 38 Brazilian Journal of Physical Therapy
- 39 Chiropractic & Manual Therapies
- 40 The Journal of Pain
- 41 Strength & Conditioning
- 42 Neuro Rehabilitation
- 43 Spine
- 44 Gait & Posture
- 45 Journal of Rehabilitation Research and Development
- 46 Clinical Medicine Insights. Therapeutics
- 47 Strategies in trauma and limb reconstruction.
- 48 Pain and Therapy
- 49 Journal of Contemporary Athletics
- 50 New Zealand Journal of Physiotherapy
- 51 BMC Musculoskeletal Disorders
- 52 Physiotherapy and Occupational Therapy Journal
- 53 Indian Journal of Orthopedics
- 54 Journal of Foot and Ankle Research
- 55 Journal of Cardiopulmonary Rehabilitation and Prevention

**Master of Physiotherapy in
Obstetrics & Gynaecology**

COURSE CONTENT

MPT PART I (0-12 Months)

SL NO	SUBJECT CODE	PAPER	SUBJECTS	MARKS
1	MPT1151	I	Physiotherapy Research, Biostatistics, Ethics & Evidence Based Practice	100
2	MPT1152	II	Principles of Physiotherapy Practice and Physiotherapeutics	100
3	MPTF1159	III	Clinical, Physical and Functional Diagnosis in OBG	100

MPT PART II (13-24 Months)

SL NO	SUBJECT CODE	PAPER	SUBJECTS	MARKS
1	MPTS1173	IV	Physiotherapy in OBG	100
2	MPTS1174	V	Recent advances & Evidence Based Practice in OBG	100

COURSE STRUCTURE (in Hours)

MPT I YEAR

EACH SUBJECT	THEORY	PRACTICAL	TOTAL
Physiotherapy Research, Biostatistics, Ethics & Evidence Based Practice	150	50	200
Principles of Physiotherapy Practice and Physiotherapeutics	150	100	250
Clinical, Physical and Functional Diagnosis in OBG	150	200	350
Clinical	--	-	1000
Seminar	-	-	150
Journal	-	-	100
			2050

MPT II YEAR

EACH SPECIALITY SUBJECT	THEORY	PRACTICAL	TOTAL
Physiotherapy in OBG	150	250	400
Recent advances & Evidence Based Practice in OBG	150	200	350
Clinical	-	-	1000
Seminar	-	-	150
Journal	-	-	100
Research club	-	-	50
			2050

Participation in departmental activities:

- a) Journal presentations Minimum 4 in 2 years
- b) Seminars Minimum 4 in 2 years
- c) Clinical Presentations Minimum 30 in 2 years
- d) Special clinics Minimum 20 in 2 years
- e) Community work /camps/ field visits Minimum 4 in 2 years
- f) Clinical rounds Minimum 250 in 2 years
- g) Dissertation work Minimum 200 hours in 2 years
- h) Technique demonstration Minimum 2 in 2 years
- i) Participation in conferences/ Optional Presentation of paper

1ST YEAR MPT COMMON SUBJECTS TO ALL SPECIALITY

TITLE OF THE PAPER I : PHYSIOTHERPAY RESEARCH, BIostatISTICS, ETHICS AND EVIDENCE BASED PRACTICE

Duration : 0 - 12 months

Teaching Scheme

Theory : 150 Hours

Practical : 50 Hours

LEARNING OBJECTIVES

5. Able to undertake independent research in the field of physiotherapy
6. To provide students with detailed training for research theory/philosophy, sampling, research design, Descriptive/inferential statistics, power, error, estimation, reliability, validity, and reading a journal article.
7. Learn Ethical codes of Physiotherapy Practice, its moral & legal aspects.
8. Employ critical thinking, self-reflection, and evidence-based practice to make clinical decisions about physical therapy services Knowledge of various types of study designs and planning for the same
9. Acquire Professionalism and management skills in planning, implementation and administration in clinical practice (service / self-employment) and academic activities including the skill of documentation and use of information technology in professional practice.

Course Description - Theory

A) PHYSIOTHERAPY RESEARCH

SI No.	Content	Hours
1	Introduction to research	01
2	Types of research	02
3	Defining a research question	02
4	Qualitative study designs-Grounded theory and Phenomenological methods.	03
5	Use of Delphi process	02
6	Quantitative study	05
7	Study design types: Case study, Case series, longitudinal cohort, Pre post design, Time series design, Repeated measures design, Randomized control design. Retrospective design, Cross sectional design Sequential clinical design, Experimental design, Superiority trials, Non-inferiority trials	05
8	Sampling design, calculating minimum sample size based on design	06
9	Measurement & scaling techniques.	06
10	Selection criteria for outcome measures in Health Sciences (Physiotherapy and Rehabilitation)	05
11	Research Methods: Designing methodology, Reporting results, Type I and Type II bias.	07
12	Communicating research.	03

B) Evidence Based Practice

SI No	Content	Hours
1	Evaluating published research: Critical appraisal of scientific literature and looking at the evidence	05
2	Introduction to Evidence based Medicine and Evidence based practice, and Evaluating evidence.	04
3	Asking clinical questions and appraising evidence	05

4	Translating of evidence into practice: strategies	02
5	Use of clinical practice guidelines, clinical pathways, clinical prediction rules to inform practice.	02
6	Use of Standardized scales and tests in various assessments. Psychometric properties, Interpretation in Physiotherapy practice and placebo effect in clinical trials.	05
7	Review of scientific methods.	02
8	Evidence Informed Practice	02

C) BIostatISTICS

SI No	Content	Hours
1	Introduction to biostatistics.	02
2	Source and presentation of data.	02
3	Measures of location, average and percentile.	02
4	Measures of central tendency, Tests of normality.	02
5	Probability and sampling distributions.	02
6	Variability and its measures.	03
7	Normal distribution and normal curve.	03
8	Measures of population and statistics.	03
9	Measurement: Properties of measurement: reliability, validity, responsiveness, Minimal Clinically Important Difference (MCID).	05
10	Role of Pilot study in research.	02
11	Data analysis: descriptive and inferential statistics, correlations and hypothesis testing.	04
12	Tests of comparison\tests of correlation, Goodness of fit, Chi square test.	04
13	Quantitative data analysis: revision of descriptive and inferential statistics, correlations and hypothesis testing, general linear model, Regression analysis, power and effect.	05
14	Analysis of variance and covariance multivariate designs, nonparametric data analysis and selection of nonparametric tests.	03
15	Epidemiological analysis – odds ratio, risk ratio.	02
	Qualitative data analysis: major qualitative methodologies,	

16	techniques in data collection and analysis.	03
17	Understanding Systematic review and Meta-analysis.	03
18	Role of computers in research -Tabulation using software packages.	03
19	Protocol writing, Manuscript writing.	02

D) ETHICS

SI No	Content	Hours
1	Introduction, History & General Principles of ethics involving human participants	02
2	Ethical consideration in Health Sciences practice (physiotherapy) - State, National & international rules & regulations governing Health Sciences practice (physiotherapy).	02
3	Ethical codes and conduct for Health professional (physiotherapy).	02
4	Informed consent process	02
5	Good clinical practices (GCP)	02
6	Ethical review procedures- protocol writing, ethical committee.	02
7	Influence of values & valuing on patient care	01
8	Ethical issues in practice of Health Science (physiotherapy).	02
9	Leadership, administration, management, and professionalism skills in Health Science (Physiotherapy)	03
10	Scope of consumer protection act in health care	03

Recommended Reading for Physiotherapy Research, Biostatistics, Ethics and Evidence

Based Practice

1. Gabard, D. L., & Martin, M. W. (2010). Physical therapy ethics. FA Davis
2. Carter, R., & Lubinsky, J. (2015). Rehabilitation research: principles and applications. Elsevier Health Sciences.
3. Feters, L., & Tilson, J. (2018). Evidence based physical therapy. FA Davis.
4. Jewell, D. V. (2017). Guide to evidence-based physical therapist practice. Jones & Bartlett Publishers.

5. Hicks, C. M. (2009). Research methods for clinical therapists: applied project design and analysis. Elsevier Health Sciences.
6. Greenhalgh, T. (2019). How to Read a Paper: The Basics of Evidence-based Medicine and Healthcare. Wiley- Blackwell.
7. Watkins, M. P., & Portney, L. (2009). Foundations of clinical research: applications to practice. Upper Saddle River, NJ: Pearson/Prentice Hall.
8. Evans I, Thornton H, Chalmers I and Glasziou P (2011). Testing Treatments, 2nd Edition; London: Pinter and Martin.
9. Khanal, A. B. (2016). Mahajan's Methods in Biostatistics for Medical Students and Research Workers. Jaypee Brothers Medical P.
10. Kuzma, J. W., & Bohnenblust, S. E. (2004). Basic statistics for the health sciences. (5th ed.). Boston: McGraw Hill.
11. Munro, B. H. (1997). Statistical methods for health care research (3rd ed.). Philadelphia: Lippincott.
12. Jenkins, S., Price CJ, & Straker L. (1998). The researching therapist. A practical guide to planning, performing and communicating research. Edinburgh: Churchill Livingstone.
13. Kettenbach, G., & Schlomer, S. L. (2016). Writing patient/client notes: ensuring accuracy in documentation. FA Davis.
14. Swisher, L. L. D., & Page, C. G. (2005). Professionalism in physical therapy: History, practice, and development. Elsevier Health Sciences.
15. Metcalf, V. A. (1983). Physical Therapy Administration and Management.
16. Kothari, C. R. (2004). Research methodology: Methods and techniques.
17. Kaushal AK. Medical negligence and legal remedies with special reference to the consumer protection law. New Delhi Universal Book Traders, 1995. p. 23-24.
18. Stokes, E. K. (2011). Rehabilitation outcome measures (pp. 27-32). Edinburgh: Churchill Livingstone.
19. Hack, L. M., & Gwyer, J. (2013). Evidence into Practice: Integrating Judgment, Values and Research. FA Davis.
20. <https://www.icmr.nic.in/guidelines>

1ST YEAR MPT COMMON SUBJECTS TO ALL SPECIALITY
TITLE OF THE PAPER II : PRINCIPLES OF PHYSIOTHERAPY PRACTICE AND
PHYSIOTHERAPEUTICS

Duration : 0 - 12 months

Teaching Scheme

Theory: 150 Hrs

Practical: 100 Hrs

LEARNING OBJECTIVES

1. Able to execute all routine physiotherapeutic procedures with evidence based practice Able to be a prominent member of the multidisciplinary physiotherapy team and treat all the conditions
2. which need physiotherapeutic procedures
3. Able to provide adequate knowledge about the treatment procedures and benefit.
4. Learn multidisciplinary practice skills
5. Able to practice and assess patient independently.

Course Description- Theory

SI No	Content	Hours
1	Anatomy and physiology of peripheral nerve, muscle and neuromuscular junction.	02
2	Electrical properties of muscle and nerve.	02
3	Basic concepts in biomechanics	02
4	Biomechanics of bone, cartilage, tendon & ligaments, muscles	03
5	Biomechanics & Pathomechanics of respiration and circulation.	02
6	Biomechanics & Pathomechanics of integrated function- Gait, Posture, Spine, Peripheral Joints, Activities of daily living, Hand function.	10
7	Instrumentation for neuromuscular electrical stimulation	02
8	Muscles plasticity in response to electrical stimulation.	02
9	Electrical stimulation and its effects on various systems.	02
10	Sources of Energy, Energy Transfer and Energy Expenditure at rest and various physical activities.	02
11	Responses and Adaptations of various systems to different types of Exercise and training.	03
12	Environmental influence on Performance.	02

13	Body consumption, nutrition and caloric balance and performance.	02
14	Considerations of age and gender in exercise and training.	04
15	Fatigue classification, assessment, management and scientific organization of work-rest regime to control fatigue.	04
16	Energy consumption MET value of various exercises and activity.	02
17	Role of nutrition and diet in physiotherapy.	05
18	History taking, assessment tests, Patient Communication, documentation of findings, treatment planning and organization.	05
19	Documentation of rehabilitation assessment and management using International Classification of Functioning Disability and Health(ICF)	04
20	Pain -modulation and management of pain	05
21	Women's Health and physiotherapy.	05
22	Geriatric Rehabilitation & theories of aging.	05
23	Exercise planning and prescription for health and fitness with special emphasis to Musculoskeletal pain, Cardiovascular disease, Pregnancy, Postpartum, Obesity, Hypertension and Diabetes.	10
24	Neurological approaches used in Rehabilitation to include theories of motor control and motor	04
25	EMG,NCV, Biofeedback methods and usage	08
26	Manual therapy-different schools of thought- Principle sand techniques.	05
27	General Guidelines in Cardiac Rehabilitation, Pulmonary Rehabilitation	05
28	Burns Rehabilitation and Cancer Rehabilitation Protocol management.	04
29	Integumentary/Wound Management	04
30	CPR, monitoring systems and defibrillators and artificial respirators.	02
31	Sensory and Motor Re-education	02
32	Principles of Paediatric Physiotherapy, approaches and management.	05
33	Musculoskeletal Physiotherapy-guidelines in trauma care, soft tissue injury and rheumatology care	05
34	Physiotherapy in Psychiatric conditions.	02
35	Yoga a. Concept of Yogic Practices- Kinds of Yogic Practices, Asana, Pranayama.	05

	b. Asana: Definition, Scope and Limitations of Asanas– Classification of Asanas–Safety Measures and Precautions while performing Asanas c. Pranayama: Meaning –Different Phases in Pranayama Practice Safety Measures and Precautions.	
36	Ergonomics: a. Introduction, History b. Job/ task/ site Analysis c. Work hardening & conditioning program d. Work related injuries educational programmes for prevention of work related injuries	03
37	Recovery of function, Neural plasticity & neural control of locomotion	02
38	Principles of sports injury, prevention and management	05
39	Bladder & bowel management.	02
40	Amputations -Assessment and Management	02

Recommended Reading for Principles of Physiotherapy Practice and Physiotherapeutics

1. O'Sullivan, S. B., Schmitz, T. J., & Fulk, G. (2019). Physical rehabilitation. FA Davis
2. Cifu, D. X. (2015). Braddom's physical medicine and rehabilitation. Elsevier Health Sciences.
3. Houglum, P. A., & Bertoti, D. B. (2011). Brunnstrom's clinical kinesiology. FA Davis.
4. Augustine, J. R. (2008). Human neuroanatomy. Academic Press.
5. Lusardi, M. M., Jorge, M., & Nielsen, C. C. (2013). Orthotics and prosthetics in rehabilitation. Elsevier Health Sciences.
6. David, J., MAGEE, M., & ROBERT, C. (2020). ORTHOPEDIC PHYSICAL ASSESSMENT. Saunders.
7. Kisner, C., Colby, L. A., & Borstad, J. (2017). Therapeutic exercise: Foundations and techniques. Fa Davis.
8. Goodman, C. C., Heick, J., & Lazaro, R. T. (2017). Differential Diagnosis for Physical Therapists-E-Book: Screening for Referral. Elsevier Health Sciences.
9. Neumann, D. A. (2013). Kinesiology of the musculoskeletal system-e-book: foundations for rehabilitation. Elsevier Health Sciences.

10. American College of Sports Medicine, Riebe, D., Ehrman, J. K., Liguori, G., & Magal, M. (2018). ACSM's guidelines for exercise testing and prescription. Wolters Kluwer.
11. Loudon, J. K., Manske, R. C., & Reiman, M. P. (2018). Clinical mechanics and kinesiology. Human Kinetics.
12. Martin, S. T., & Kessler, M. (2015). Neurologic interventions for physical therapy. Elsevier Health Sciences.
13. Donatelli, R. A., & Wooden, M. J. (2009). Orthopaedic Physical Therapy-E-Book. Elsevier health sciences.
14. Cameron, M. H. (2017). Physical Agents in Rehabilitation-E Book: An Evidence-Based Approach to Practice. Elsevier Health Sciences.
15. Avers, D., & Brown, M. (2018). Daniels and Worthingham's Muscle Testing: Techniques of Manual Examination and Performance Testing. Elsevier Health Sciences.
16. Kimura, J. (2001). Electrodiagnosis in diseases of nerve and muscle: principles and practice. Oxford university press.
17. Lee, H. J., & DeLisa, J. A. (2005). Manual of nerve conduction study and surface anatomy for needle electromyography. Lippincott Williams & Wilkins.
18. Stokes, E. K. (2011). Rehabilitation outcome measures (pp. 27-32). Edinburgh: Churchill Livingstone.
19. Shumway-Cook, A., & Wollacott, M. (2016). Motor control: translating research to practice.
20. McKinnis, L. N. (2013). Fundamentals of musculoskeletal imaging. FA Davis.
21. Hillegass, E. (2016). Essentials of cardiopulmonary physical therapy. Elsevier Health Sciences.
22. Fettes, L., & Tilson, J. (2018). Evidence based physical therapy. FA Davis.
23. Goodman, C. C., & Fuller, K. S. (2014). Pathology: implications for the physical therapist. Elsevier Health Sciences.
24. Cifu, D. X. (2015). Braddom's physical medicine and rehabilitation. Elsevier Health Sciences.
25. Kenney, W. L., Wilmore, J. H., & Costill, D. L. (2018). Physiology of sport and exercise. Human kinetics.
26. Park, J. W., & Jung, D. I. (Eds.). (2016). Integumentary Physical Therapy. Springer.
27. Sandrini, G., Homberg, V., Saltuari, L., Smania, N., & Pedrocchi, A. (Eds.). (2018). Advanced Technologies for the Rehabilitation of Gait and Balance Disorders (Vol. 19). Springer.
28. Hillegass, E. (2016). Essentials of cardiopulmonary physical therapy. Elsevier Health Sciences.
29. Nair, K. P. S., González-Fernández, M., & Panicker, J. N. (Eds.). (2018). Neurorehabilitation Therapy and Therapeutics. Cambridge University Press.

30. Brukner, P. (2017). *Brukner & Khan's Clinical Sports Medicine*. McGraw-Hill Education.
31. Herzog, W. (Ed.). (2000). *Clinical biomechanics of spinal manipulation*. Churchill Livingstone
32. SandyFritz,KathleenPaholskyandM.JanesGrosenbach-BasicSciencefor soft tissueandmovementtherapies.
33. Saunders, R., Astifidis, R., Burke, S. L., Higgins, J., & McClinton, M. A. (2015). *Hand and upper extremity rehabilitation-e-book: a practical guide*. Elsevier Health Sciences.
34. Jean M Irion, Glenn L Irion.*Women's Health in Physical Therapy: Principle and Practices for Rehab Professionals (Point (Lippincott Williams & Wilkins)) 1st Edition*
35. Swami Satyananda Saraswati, asana Pranayama mudra bandha, Yoga Publications Trust, Ganga Darshan, Munger, Bihar, India. Fourth (revised) edition, 2008
36. Malhotra, A. K. (2017). *An Introduction to Yoga Philosophy: an annotated translation of the Yoga Sutras*. Routledge
37. Brukner, P. (2017). *Brukner & Khan's Clinical Sports Medicine*. McGraw-Hill Education.
38. Goodman, C. C., & Snyder, T. E. K. (2000). *Differential diagnosis in physical therapy*. Philadelphia, PA: Saunders.
39. Poduri, K. R. (2017). *Geriatric Rehabilitation: From Bedside to Curbside*. CRC ress.
40. Long, T. (2018). *Handbook of pediatric physical therapy*. Lippincott Williams & Wilkins.
41. Tecklin, J. S. (Ed.). (2008). *Pediatric physical therapy*. Lippincott Williams & Wilkins.
42. Stokes, M., & Stack, E. (Eds.). (2011). *Physical Management for Neurological Conditions E-Book:[Formerly Physical Management in Neurological Rehabilitation E-Book]*. Elsevier Health Sciences.
43. Martin, S. T., & Kessler, M. (2015). *Neurologic interventions for physical therapy*. Elsevier Health Sciences.
44. Shamus, E., Stern, D. F., & Stern, D. F. (2011). *Effective documentation for physical therapy professionals*. McGraw-Hill Medical.
45. Jacobs, K. (Ed.). (2008). *Ergonomics for therapists*. Elsevier Health sciences.

**TITLE OF THE PAPER III : Clinical, physical and functional diagnosis in OBG
Physiotherapy**

Duration : 0 - 12 months

Maximum Mark = 100

Theory : 150 hrs

Practical : 300 hrs

Sl.No.	Content	Hours
I	REVIEW OF ANATOMY, PHYSIOLOGY, BIOMECHANICS AND DISORDERS OF MENSTRUAL CYCLE	25
1.	Anatomy of female reproductive system and abdominal wall	
2.	Contents of the pelvic cavity- Pelvic diaphragm, Pelvic floor, muscles, Perineum and external genitalia, Rectum	
3.	Pelvic axis, position, obstetric diameters and shape and abnormal bony pelvis	
4.	Clinical biomechanics and patho-mechanics of spine, female pelvis, posture, movement and gait	
5.	Anatomy, pathologies related to endocrine system and understanding the differential diagnosis	
6.	Ovulation induction, Ovarian function, clinical aspects of ovulation	
7.	Pre menstrual syndrome	
8.	Polycystic ovarian syndrome	
9.	Menstruation cycle and other clinical phenomenon such as amenorrhea, dysmenorrhea, metrorrhagia, Menorrhagia, polymenorrhea, oligomenorrhea and hypothalamic pituitary dysfunction	
10	Anatomy, physiology and pathophysiology of Lymphatic system	

II	REVIEW OF PREGNANCY, LABOR AND PUERPERIUM	25
1	Preconception health, factors affecting conception	
2	Conception	
3	Physiological changes during pregnancy	
4	Physiology of labor	
5	Physiological changes and physical problems in puerperium	
6	Injuries of uterine support & pelvic joints during labor, Repair of perineum after delivery, Pelvic Girdle Pain, Sacroiliac dysfunction	
7	Anatomical & physiological changes during postpartum period	
8	Understanding Bio- psychosocial model of pregnancy and postpartum	
III	REVIEW OF CONTRACEPTION, STERILIZATION AND FERTILITY	10
1	Injectable and implantable contraception	
2	Intra uterine devices	
3	Abortion and Miscarriage	
4	MTP and Sterilization	
5	Fertility, infertility, sub fertility	
IV	CLINICAL DIAGNOSIS AND INVESTIGATIONS IN HIGH RISK PREGNANCY	20
1	Abortion, ectopic pregnancy	
2	Heart disease in pregnancy assessment	
3	Diabetes mellitus in pregnancy	
4	UTI in pregnancy	
5	HIV in pregnancy	
6	Trauma in pregnancy	
7	Hypertension in pregnancy	
8	Gastrointestinal disorders in pregnancy	
9	Viral exposure during pregnancy	
10	Vaginal birth after caesarean section	
V	UROGYNACOLOGY SYSTEM	20
1	Review of mechanism of continence and voiding difficulties	
2	Review of Sexual dysfunction in Urogynecology	
3	Assessment of Urinary bladder dysfunction	

4	Genital Prolapse, Assessment and diagnosis of vaginal dysfunction	
5	Assessment Pelvic girdle pain and chronic pelvic pain	
6	Other displacements of uterus, assessment and diagnosis	
7	Overactive bladder syndrome, assessment and diagnosis	
8	Assessment of bowel dysfunction	
VI	THE AGEING FEMALE	10
1	Anatomical & physiological & psychological changes of Pre Menopause, Peri Menopause and Menopause	
2	Assessment and diagnosis of Senile osteoporosis & related complications	
3	The climacteric- assessment and diagnosis	
VII	INVESTIGATIONS IN OBSTETRICS AND GYNECOLOGY WITH INTERPRETATION	20
1	Pregnancy tests and investigations	
2	Imaging techniques in obstetrics and gynaecology	
3	Urodynamic investigations	
4	Investigations of endocrinal disorders in females	
5	Instrumentation for assessment of Pelvic floor muscles- Perineometer	
6	Outcome measures in OBG Physiotherapy	
VIII	Specific assessments topics	20
1	Antenatal physiotherapy assessment in normal, precious, and complicated pregnancy and conception in special population and antenatal assessment	
2	Postnatal physiotherapy assessment in normal, caesarean sections and complicated deliveries and special cases assessment in divyang mother or baby with genetic anomalies, empty cradle cases.	
3	Assessment of pain and musculoskeletal dysfunction	
4	Breast function, disorders and assessment, Lactation, Breast feeding Importance, challenges, positions.	
5	Abdominal incisions & assessment	
6	Anthropometric measurements	
7	Assessment, clinical tests and diagnosis of movement dysfunction and other musculoskeletal dysfunctions during pregnancy and postpartum period	
8	Lymphedema assessment and differential diagnosis	
9	Fitness testing and exercise prescription in women	

Recommended Reading :

1. Gray, Henry. 1918. Anatomy of the Human Body, 20th ed.
2. C.Guyton, John E. Hall, Textbook of medical physiology, W.B.Saunders company-Harcourt Brace Jovanovich, Inc.
3. D.K.James et al. High Risk Pregnancy-management options, Saunders-An imprint of Elsevier.
4. Margaret Polden, Jill Mantle, Physiotherapy in obstetric and gynecology, Butterworth-Heinemann, Linacre house, Jordan Hill, Oxford, 1990.
5. Ann Thomson, Tidy's physiotherapy, Varghese publishing House, Bombay.
6. Ruth Sapsford, Joanne Bullock-Saxton, Sue Markwell. Women's Health: A Textbook for Physiotherapists, 1997.
7. Scientific basis of human movement –Gowitzke, Williams and Wilkins, Baltimore, 1988, III edition.
8. Clinical biomechanics of spine – White A, and Panjabi- J, B. Lippincot, Philadelphia 1978.
9. Physiotherapy in Obstetrics and Gynaecology- 2nd edition- Jill Mantle, Jeanette Haslam, Sue Bartom. Forwarded by Professor Linda Cardow
10. Physiotherapy in Obstetrics & Gynaecology – Polden & Mantle, Jaypee Brothers, New Delhi, 1994.
11. D.C Datta -Textbook of Gynaecology. 1st edition
12. Women's Health- A textbook for Physiotherapists R.Sapsford J. Bullock. Saxton.S, Markwell.- (W.B. Saunders)
13. Obstetrics & Gynaecologic care in Physical Therapy- 2nd edition-Rebecca.C. Stephenson, Linda.J.O'contuor
14. Clinical Cases in Obstetreibs & Gynaecology- Haresh U. Doshi, published by Arihant publishers
15. Advanced in Obstetrics & Gynaecology(vol 2)- Shalini Rajaram, Sumita Mehta,Niraj Goel(Jaypee brothers.
16. Physiotherapy Care for Women's Health – R. Baranitharan, V. Mahala Kshmi (jaypee brothers)
17. Williams Obstetrics- 22nd edition- F.Gary Cunningham, Krenneth J Leveno, Steven L Bloom.
18. Women's Health- 5th edition edited by Deborah Waller, Ann McPherso (oxford)
19. Steven G Gabbe, Jennifer.R. Niebyl Joe Leigh simpson- Obstetrics Normal & Problem Pregnancies - 5th edition- associate editors : Henry Galon, Laura Guetzi, Mark Landson, Eric.R.M. Jauniau

TITLE OF THE PAPER IV : Obstetrics and Gynecology (OBG) Physiotherapy

Duration : 13 - 24 months

Maximum Mark = 100

Theory : 150 hrs

Practical : 250 hrs

S.NO.	CONTENT	HRS
I	PHYSIOTHERAPY MANAGEMENT OF MENSTRUAL PROBLEMS	15
1	Nutrition in adolescence	
2	Physiotherapy management of puberty disorders	
II	PHYSIOTHERAPY MANAGEMENT OF MATERNAL MUSCULOSKELETAL DISORDERS	30
1	Neck & upper back strain	
2	TMJ pain	
3	Thoracic outlet syndrome, costal rib pain	
4	Carpal tunnel syndrome	
5	Dequervain's diseases	
6	Diastasis recti abdominis	
7	Sacroiliac joint dysfunction (anterior & posterior innominate)	
8	Symphysis pubis dysfunction	
9	Low back pain, piriformis syndrome, coccyx pain	
10	Knee & patella dysfunction	
11	Nerve palsies, muscle & tendon injuries	
12	Pelvic Girdle Pain	
13	Posture and deviation in gait in antenatal and postnatal periods	
III	PHYSICAL THERAPY MANAGEMENT DURING ANTENATAL PERIOD AND POST NATAL PERIOD	25
1	Early bird classes and child birth educator	
2	Therapeutic exercises, modalities, therapeutic activities, and neuromuscular re-education	
3	Methods of relieving pregnancy discomfort	
4	Relaxation Techniques and Stress management during pregnancy	
5	Aquanatal exercises during antenatal period	

6	Preparation for labour (Road map to labor)	
7	Cultural perspective of child bearing: what to educate and how to educate	
8	Prenatal preparation of breast feeding	
9	Maternal position and state during postpartum period	
10	Ergonomic advice in postpartum period	
11	Massage techniques	
12	Handling techniques of new born	
13	Baby care ergonomics	
14	Approaches in pregnancy, Choice of delivery settings, understanding the need of delivery in hospital	
15	Understanding Post natal care in hospital and community settings benefits and disadvantage	
16	Understanding the use of BIO-PSYCHOSOCIAL model in physiotherapy management of antenatal and post partum ailments	
IV	GENERAL GYNAECOLOGICAL CONDITIONS	20
1	Physiotherapy management for urinary and faecal incontinence	
2	Physiotherapy management for genital prolapse	
3	Physiotherapy management for endometriosis	
4	Physiotherapy management for chronic pelvic pain and dyspareunia	
5	Physiotherapy management for sexual dysfunction	
6	Physiotherapy management for Pelvic Inflammatory Disease	
7	Physiotherapy management for sexually transmitted diseases	
8	Physiotherapy management for long term effects of menopause(Osteoporosis, cardiovascular changes, body composition , balance etc)	
V	INVESTIGATIONS IN OBSTETRICS AND GYNECOLOGY WITH INTERPRETATION 20 hrs	15
1	Pregnancy tests and investigations	
2	Imaging techniques in obstetrics and gynecology	
3	Urodynamics investigations	
4	Investigations of endocrinal disorders in females	
5	Instrumentation for assessment of Pelvic floor muscles- Perineometer	
6	Outcome measures in OBG Physiotherapy	
VI	OPERATIVE PROCEDURES AND PHYSIOTHERAPY MANAGEMENT	15
1	Principles of surgery and Physiotherapy management of intra operative complications	
2	Pre operative and post operative care	
3	Hysterectomy and Physiotherapy management	
4	Fertility awareness and family planning methods	

5	Cancer Rehabilitation (Breast & Cervical cancer)	
6	Physiotherapy management of lymphedema	
VII	THE HEALTHY AGEING IN FEMALE WELLNESS CONCERN AND PHYSIOTHERAPY MANAGEMENT	10
1	Physiological changes in ageing female and its effect on musculoskeletal system	
2	Physical wellness physical activity and its importance	
3	Prevention and management of osteoporosis	
4	Fall prevention and management	
5	Traditional and complementary medicine in healthy ageing	
6	Effect of menopause on sexuality and sexuality following surgery	
7	Tools for lifestyle change	
8	Mental health and wellbeing	
9	Exercise testing for wellness programs	
VIII	Specific Physiotherapy management	20
1	Physiotherapy Management for musculoskeletal Complications during menopause	
2	Nutrition in post menopausal women	
3	The methods of infection control for physiotherapist working with women's health	
4	Assisted reproduction treatments	

Recommended Reading:

1. Gray, Henry. 1918. Anatomy of the Human Body, 20th ed.
2. C.Guyton, John E. Hall, Textbook of medical physiology, W.B.Saunders company- Harcourt Brace Jovanovich, Inc.
3. D.K.James et al. High Risk Pregnancy-management options, Saunders-An imprint of Elsevier.
4. Margaret Polden, Jill Mantle, Physiotherapy in obstetric and gynecology, Butterworth-Heinemann, Linacre house, Jordan Hill, Oxford, 1990.
5. Ann Thomson, Tidy's physiotherapy, Varghese publishing House, Bombay.
6. Ruth Sapsford, Joanne Bullock-Saxton, Sue Markwell. Women's Health: A Textbook for Physiotherapists, 1997.
7. Scientific basis of human movement –Gowitzke, Williams and Wilkins, Baltimore, 1988, III edition.
8. Clinical biomechanics of spine – White A, and Panjabi- J, B. Lippincot, Philadelphia 1978.

9. Physiotherapy in Obstetrics and Gynaecology- 2nd edition- Jill Mantle, Jeanette Haslam, Sue Bartom. Forwarded by Professor Linda Cardow
10. Physiotherapy in Obstetrics & Gynaecology – Polden & Mantle, Jaypee Brothers, New Delhi, 1994.
11. D.C Datta -Textbook of Gynaecology. 1st edition
12. Women’s Health- A textbook for Physiotherapists. R.Sapsford J. Bullock. Saxton. S, Markwell.- (W.B. Saunders)
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TITLE OF THE PAPER V : Recent advances & Evidence Based Practice in OBG		
Physiotherapy		
Duration : 13 - 24 months Maximum Mark = 100		
Theory : 150 hrs		
Practical : 250 hrs		
Content Hours		
1	Antenatal Pilates and post natal Pilates	5
2	Alternative therapies in OBG conditions	15
3	Alternate approaches to fitness in antenatal & postpartum period	15
4	Recent advances in Outcome measures used in OBG physical therapy	15
5	Recent advances in evaluation and treatment of maternal musculoskeletal disorders in Obstetrics and Gynecology	10
6	EBP and recent advances of Electrotherapy in OBG Physiotherapy	10
7	EBP and recent advances of Exercise therapy in OBG Physiotherapy	10
8	EBP and recent advances of Hydrotherapy in OBG Physiotherapy	5
9	EBP and recent advances of Thermotherapy in OBG Physiotherapy	5

10	EBP and recent advances of Cryotherapy in OBG Physiotherapy	5
11	EBP and recent advances of joint mobilization techniques in OBG Physiotherapy	15
12	Recent advances in instrumentations, theories, Obstetrics and Gynaecology physical therapy techniques	20
13	EBP of Nutrition in women from adolescence to menopause	10
14	EBP and recent advances in PCOS management with physiotherapy	5
15	EBP and recent advances in health and wellness promotion in women's health	5

Recommended Reading:

1. Gray, Henry. 1918. Anatomy of the Human Body, 20th ed.
2. C.Guyton, John E. Hall, Textbook of medical physiology, W.B.Saunders company- Harcourt Brace Jovanovich, Inc.
3. D.K.James et al. High Risk Pregnancy-management options, Saunders-An imprint of Elsevier.
4. Margaret Polden, Jill Mantle, Physiotherapy in obstetric and gynecology, Butterworth-Heinemann, Linacre house, Jordan Hill, Oxford, 1990.
5. Ann Thomson, Tidy's physiotherapy, Varghese publishing House, Bombay.
6. Ruth Sapsford, Joanne Bullock-Saxton, Sue Markwell. Women's Health: A Textbook for Physiotherapists, 1997.
7. Scientific basis of human movement -Gowitzke, Williams and Wilkins, Baltimore, 1988, III edition.
8. Clinical biomechanics of spine - White A, and Panjabi- J, B. Lippincot, Philadelphia 1978.
9. Physiotherapy in Obstetrics and Gynaecology- 2nd edition- Jill Mantle, Jeanette Haslam, Sue Bartom. Forwarded by Professor Linda Cardow
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13. Obstetrics & Gynaecologic care in Physical Therapy- 2nd edition-Rebecca.C. Stephenson, Linda.J.O'contuor
14. Clinical Cases in Obstetereics & Gynaecology- Haresh U. Doshi, published by Arihant publishers

Recommended Journals

1. Archives of Physical Medicine & Rehabilitation
2. Acta Obstetrica et Gynecologica Scandinavica
3. American Journal of Obstetrics and Gynecology
4. Clinical Obstetrics and Gynecology
5. European Journal of Obstetrics, Gynecology, and Reproductive Biology
6. Gynecologic and Obstetric Investigation
7. International Journal of Gynaecology and Obstetrics
8. Obstetrics and Gynecology
9. Obstetrics and Gynecology Clinics of North America
10. Surgery, Gynecology, and Obstetrics
11. International Urogynecological Journal Pelvic Floor Dysfunction
12. Neurourology and Urodynamics
13. Clinical Rehabilitation
14. Physical Therapy
15. Physiotherapy
16. Physical Medicine & Rehabilitation
17. Physical & Occupational Therapy in Physical Therapy
18. Physiotherapy Theory & Practice
19. Indian Journal of Physiotherapy & Occupational Therapy



SDM College of Medical Sciences & Hospital



SDM College of Dental Sciences & Hospital



SDM College of Physiotherapy &
SDM Institute of Nursing Sciences



Shri Dharmasthala Manjunatheshwara University



SDM Research Institute for Biomedical Sciences



Panoramic View of Campus