SYLLABUS

FOR COURSES AFFILIATED TO THE

KERALA UNIVERSITY OF HEALTH SCIENCES

THRISSUR 680596

MASTER OF PHYSIOTHERAPY (MPT)

IN OBSTETRICS AND GYNAECOLOGY

Course Code: 576

(2025-2026 Academic year onwards)

2. COURSE CONTENT

2.1 Title of course:

MASTER OF PHYSIOTHERAPY IN OBSTETRICS AND GYNAECOLOGY

2.2 Objectives of course

The Master of Physiotherapy Program in Obstetrics and gynaecology is directed to meet the global standards of Physiotherapy education & practice and to enhance individual competence in order to fulfil requirements in the field of Obstetrics and gynaecology. The specific aims are:

1. Plan, deliver and evaluate appropriate exercise programs for specific women groups of the community.
2. Understand the impact of exercise on the altered physiology, pathophysiology and psychology of pregnancy, menopause, aging and osteoporosis.
3. Identify the legal and safety issue associated with leading exercise classes for women with specific physical need.
4. An understanding of the significance and value of their knowledge to wider community.
5. Understand the motivational and marking aspect of leading community and hospital based exercise classes.
6. An advanced understanding of the changing knowledge based in this clinical area.
7. An ability to evaluate and synthesis of research and professional literature in this area.

2.2 Medium of instruction:

Medium of instruction and examinations shall be in English.

2.3 Course outline

The Masters Degree in Physiotherapy is a two year program consisting of classroom teaching, self directed academic learning activities, a research project and clinical postings. In the first year theoretical basis of fundamental Physiotherapy subjects are refreshed. In the second year, the students learn on the clinical conditions, physiotherapy assessment and advanced techniques in neurological disorders. During these two years, the students will be posted in OBSTETRICS AND GYNAECOLOGY departments. The learning program includes seminars, journal reviews, case presentations, case discussions and classroom teaching. Some of the clinical postings are provided at other reputed centers in the country in order to offer a wider spectrum of experience. The students are encouraged to attend conference and workshop to enhance their knowledge during their entire course of the study. University examinations are held at the end of second year.

To fulfill their course completion, the students are required to complete and submit their dissertation on the research project.

2.4 Duration

The duration of the course shall be two years.

2.5 Syllabus

PAPER I APPLIED BASIC SCIENCES

This paper consists of 4 Modules:

I Bio Statistics and Research Methodology

II. Biomechanics and Pathomechanics

III. Ergonomics

IV. Nutrition and Exercise Physiology

MODULE I

BIO STATISTICS, RESEARCH METHODOLOGY

PART I. Research Methods

1. Research fundamentals

- Research – Definition, concept, purpose, approaches
- Theory in Physiotherapy research
- History of physiotherapy research
- Present scenario
- Research ethics

2. Research design

- Research problems, questions and hypotheses
- Research paradigms
- Design overview
- Research validity
- Selection and assignment of subjects

3. Writing a research proposal/critiquing a research article

- Defining a problem
- Review of literature
- Formulating a question and operational definition
- Inclusion and Exclusion criteria
- Forming groups
- Data collection & analysis
- Results,Interpretation, Conclusion, Discussion
- Informed consent
- Limitations

4. Experimental designs

- Group designs
- Single system design

5. Non experimental design

- Overview of non experimental research
- Qualitative research
- Epidemiology

- Outcome research
- Survey research

Part II: Measurement and Analysis

1. Measurement

- Measurement theory
- Methodological research
- Measurement tools for Physiotherapy research

2. Data Analysis

- Statistical reasoning
- Statistical analysis of differences:
    a. The basics
    b. Advanced and special techniques
- Statistical analysis of relationship:
    a. The basics
    b. Advanced and special techniques

Part III: Locating and Evaluating the Literature

Part IV Implementing Research

1. Implementing the projects
2. Publishing and presenting research

Module II Biomechanics and Pathomechanics

Part I Foundational concepts in Bio and Pathomechanics

Unit:

1. Basic concepts in biomechanics
2. Biomechanics of tissues and structures of the musculoskeletal system
    - Bone
    - Articular cartilage
    - Tendons and ligaments
    - Peripheral nerves
    - Skeletal muscle
3. Functional adaptation of bone under pathological conditions
4. Mechanics of joint and muscle action

5. Body balance and equilibrium

Part II Biomechanics and Patho-mechanics of joints Unit:

1. Upper extremity
2. Lower extremity
3. Vertebral column
4. Thorax and chest wall
5. Tempero mandibular joint

Part III: Biomechanics of integrated function Unit:

1. Gait
2. Posture
3. Arm as a whole

Module III:Ergonomics

Units:

1. History of ergonomics
2. Worker care spectrum
3. Functional assessment
4. Weighted capabilities
5. Participation level
6. Postural examination
7. Job analysis
8. Work hardening programme
9. Exit assessment
10. Pre-employment screening
    - Job analysis
    - Job task analysis
    - Job site analysis
11. Work capacity analysis
12. Role of Physiotherapy in industrial set u p
13. Workers functional capacity assessment
14. Industrial therapy

15. Educational programme for prevention of injury
16. Adult education
17. Injury prevention and ergonomics

Module IV: Nutrition and Exercise physiology

Part I: Basic Exercise Physiology

Unit:

1. Introduction to exercise physiology
2. Nutrition and Performance
3. Energy transfer
4. Measurement of human energy expenditure
5. Systems of energy delivery and utilization
    - Pulmonary system
    - Cardiovascular system
    - Musculoskeletal
    - Nervous System
    - Endocrine system

Part II: Applied Exercise Physiology

Unit:

1. Aerobic power training
2. Anaerobic power training
3. Special aids in performance and conditioning
4. Exercise at different altitudes
5. Exercise at various climatic conditions
6. Sport diving
7. Obesity and weight control
8. Exercise and aging
9. Clinical exercise physiology

PAPER II: PHYSIOTHERAPEUTICS

This paper consists of 4 Modules:

- **Manual therapy**
- **Exercise therapy**
- **Electrotherapy**
- **Electrophysiology**

Module I: Manual Therapy

Part I: Foundational concepts in Manual therapy

Unit:

1. History of manual therapy
2. Biomechanical principles in manual therapy
    - Concave-Convex rule
    - Close pack and Loose pack Positions
    - Resting positions
    - Joint status
    - Barrier concepts
    - Fryette's Laws
    - Articular neurology
3. Pain

Part II: Joints Mobilization Techniques

(Terminology, Principles, Indications, Contra-indications, Assessment and method of application of the following techniques)

Unit:

1. Kalten born
2. Maitland
3. Mulligan
4. McKenzie
5. Cyriax
6. Butler neural mobilization

Part III Soft Tissue Techniques and Recent Advances in Manual Therapy

(Terminology, Principles, Indications, Contra indications, Assessment and method of Application of the following techniques)

Unit:

1. Myofascial release techniques
2. Muscle energy techniques
3. Trigger point release
4. High velocity thrust techniques
5. Positional release techniques
6. Instrument-Assisted Soft Tissue Mobilization (IASTM)
7. Active Release Techniques (ART)

Module II: Exercise Therapy

Part I: Foundational Concepts

Unit:

1. Application of Disablement and Enablement models in therapeutic exercise
2. Principles of self management and exercise instruction
3. Prevention, health and wellness

Part II: Applied Science of Exercise and Techniques

Unit:

1. Range of motion
2. Stretching
3. Resisted exercise
4. Principles of aerobic exercise
5. Exercise for balance and posture
6. Aquatic exercises
7. Training with functional devices

Part III: Evidenced Based Clinical Applications of Exercise and Techniques

Module III: Electrotherapy

Part I: Foundational Concepts in Electrotherapy

Unit:

1. Bioscience of therapeutic electrical currents
   - Basic physics
   - Basic principles of electricity
   - Types of current
   - Classification of therapeutic electrical currents
   - Parameters of therapeutic electrical currents

2. Bioscience of therapeutic thermal modalities
   - Thermal physics
   - Bio physics
   - Basic principles of thermal agents
   - Classification of thermal agents
   - Parameters of thermal agents

3. Physiology
   - Electrical properties of tissues
   - Skin
   - Tissue repair and healing
   - Sensory and motor nerves
   - Pain
   - Circulatory system and edema

4. Physiological response to electrical stimuli
5. Physiological response to thermal stimuli
6. Clinical effects of electrical and thermal modalities
    - Soft tissue
    - Joints
    - Neuronal activity
    - Muscle performance
    - Visceral tissues
    - Abnormal tissues (Hematomas and malignant tumors)
7. Current concepts in electrotherapy

Part II. Thermal Modalities

Unit

1. Shortwave diathermy
2. Microwave diathermy
3. Infrared radiation
4. Ultrasound
5. Cryotherapy

Part III. Photo Chemical Agents

Unit

1. Laser
2. Ultra violet radiation

Part IV. Electrical Stimulation Modalities

Unit:

1. Faradic current
2. Galvanic current
3. Neuromuscular electrical stimulation
4. Transcutaneous electrical nerve stimulation
5. Interferential therapy
6. Functional electrical stimulation

7. High voltage pulsed galvanic stimulation
8. Didynamic currents
9. Russian currents
10. Micro current therapy
11. Low intensity alternating current
12. Rebox
13. Ionotoporosis

Part V. Mechanical Modalities

Unit

1. Traction
2. Compression
3. Hydrotherapy

Part VI. Recent Advances in Electrotherapy

Unit

1. Shock wave therapy
2. Combination therapy
3. Long wave diathermy
4. Magneto therapy
5. Pulsed Electromagnetic Field Therapy PEMF (PEMF)

Part VII. Evidence Based Clinical Application of Electrotherapeutics

Unit

1. Pain
2. Muscle strengthening and prevention of atrophy
3. Muscle spasm
4. Central nervous system lesions
5. Peripheral nervous system lesions
6. Edema and peripheral vascular dysfunctions
7. Wound healing
8. Pelvic floor dysfunctions
9. Obesity

Module IV Electrophysiology

Part I Foundational Concept

Unit

1. Historical perspective
2. Terminology
    - Electro diagnosis
    - Electro neuromyography (ENMG)
3. Effectiveness of electrical stimuli

Part II Basic Physiology of Nerve and Muscles

Unit

1. Membrane physiology
2. Muscle physiology
3. Nerve physiology
4. Physiological variables affecting electrophysiological tests

Part III Instrumentation Unit

1. Components of electro diagnostic apparatus
2. Technical variables

Part IV Principles of Electro Physiological Techniques

Unit

1. **Traditional methods**
    - Faradic galvanic test
    - Strength duration test
    - Chronaxie test
    - Rheobase test
    - Reaction of regeneration test
    - Nerve excitability test
2. **Recent Methods**
    - Principles of NCS and EMG

Part V Evidence Based Application of Electrophysiological studies in Physiotherapy

Unit

1. Kinesiological electro myography

2. EMG biofeedback
3. Application of traditional and contemporary techniques in Physiotherapy
4. Common parameters used in Physiotherapy research

Paper III

PART I. **Basic Anatomy and Physiology of the pelvis and reproductive organ**
PART II. **Clinical obstetrics and gynaecology**
PART III. **Diagnostics and evaluation**
PART IV. **Surgery**
PART V. **Advanced physiotherapy in obstetrics and gynaecology**

TOTAL HOURS: 1350 Hours

S.NO	TOPIC	HOURS
1.	**Basic Anatomy and Physiology of the pelvis and reproductive organ** • Review of Pelvic anatomy, • Types of pelvis • Pelvic floor muscles. • Pelvic Organs, reproductive tract and abdominals. • Internal and external genitalia. • Endocrine physiology related to reproductive medicine. • Physiological changes occurring in female during pregnancy • Menarche, menopause	**370**
2.	**Clinical obstetrics and gynaecology** GYNAECOLOGICAL CONDITIONS: • Gynaecological infections, Pelvic inflammatory diseases, Diseases of the vulva, Diseases of the vagina. • Disorders of the ovary, uterus: Cyst and new growth in reproductive system, Endometriosis, Polycystic ovarian syndrome. (PCOS), Uterine prolapse • Chronic pelvic pain, Infertility, Menstrual abnormalities, Contraception and family planning	**270**

	• Breast cancer- screening procedures, mastectomy • Menopause and osteoporosis. • STD OBSTETRIC CONDITIONS • Stress incontinence • Foetal distress syndrome • Shock in obstetrics • Acute renal failure in obstetrics • Blood coagulation disorder in obstetrics • High risk pregnancy • Post-natal complications • Uterine prolapse • APH, PPH • Medicolegal aspects in obstetrics	
3.	**Diagnostics and evaluation** • History and examination in Obstetrics/Gynaecology • Anthropometry in pregnancy • Diagnostic procedures in gynaecology and obstetrics • Pelvic floor assessment: Measurement of pelvic floor muscle function and strength pelvic organ Prolapse	**170**
4.	**Surgery** • Caesarean • Hysterectomy • D & C • MTP • Tubectomy • Prevention of thromboembolism • Post-surgical complications • Oncological conditions • Abortion and its types.	**170**
5.	**Advanced physiotherapy in obstetrics and gynaecology** **Obstetrics:** Antenatal exercise in pregnancy. Concept, principles and organization of antenatal exercises.	**370**

	PT management of common syndrome of pregnancy. Role of PT in antenatal complication. Ergonomics during childbearing phase. Role of physiotherapy in high risk pregnancy. Role of physiotherapy during Labor and its management. PT management of immediate and late postnatal complications. Concepts, principles and organization of postnatal classes.	
	Gynecology: Exercise for an adolescent female. Principles and techniques of application of pelvic floor exercises. Use of electrotherapy modalities in training Pelvic floor muscles. a. Therapeutic electrical stimulation. & Biofeedback. Physiotherapy management in Pelvic floor dysfunction. Prevention and Physiotherapy intervention in Osteoporoses. Breast cancer rehabilitation. Physiotherapy management of Lymphedema after mastectomy. Physiotherapy intervention before and after gynecological surgeries.	
	GENERAL WELL-BEING • Antenatal classes, Aerobic and Anaerobic training, Swiss ball in Pregnancy, Weight training in Pregnancy. • Women Health & fitness: Aerobics, Pilates, Ti-Chi, Yoga-meditation, Zumba	

TOTAL HOURS: 1350 Hours

Content of each subject in each year

As in 2.6 above

2.8 No: of hours per subject

Paper	Teaching a nd Learning Methods	Weekly class hours	Total hours
Paper I: Applied Basic Sciences Subjects: 1. Bio Statistics and Research Methodology 2. Biomechanics and Pathomechanics 3. Ergonomics 4. Nutrition and Exercise Physiology Paper II: Physiotherapeutics Subjects: 1. Manual therapy	Lectures	2	180
	Seminars	2	180

2. Exercise therapy 3. Electro therapy 4. Electrophysiology Paper III Physiotherapy in OBSTETRICS AND GYNAECOLOGY Subjects: I Basic Anatomy and Physiology of the pelvis and reproductive organ II Clinical obstetrics and gynaecology III Diagnostics and evaluation IV Surgery V Advance physiotherapy in obstetrics and gynaecology	Practicals and Demonstrations	4	360
	Clinical Discussions	2	180
	Clinical Case Presentations	2	180
	Journal Club	2	180
	Class room teaching	1	90
	Library	3	270
	Clinical Training	15	1350
Synopsis & Dissertation work		3	210
Community Camps, Field Visits, Participation in Workshops & Conferences			60
TOTAL HOURS		36	3240

2.9 Practical training

Practical training should be imparted under laboratory conditions for the basic science subjects with emphasis on carrying out the experiments and tests through demonstration by relevant faculty and repeated practice by the students. For physiotherapy assessment and treatment techniques these should be first demonstrated on human models and the students should practice on human models repeatedly until proficiency is gained. Later the techniques should be demonstrated on patients during bed side clinics and the students are encouraged to carry out the techniques on patients under supervision of faculty.

2.10 Records

In all subjects with practical components meticulous records should be kept regarding the topic of the practical training, procedure, materials and methods used, results and outcomes. The records should be submitted for inspection during practical or viva examination.

2.11 **Dissertation:**

As per Dissertation Regulations of KUHS

2.12 Specialty training if any

2.13 Project work to be done if any

Not applicable

2.14 Any other requirements [CME, Paper Publishing etc.]

All students should attend at least two CME program each year preferably conducted in their own institution and two other conferences/workshops.

2.15 Prescribed/recommended textbooks for each subject Bio statistics, Research methodology

1. Rehabilitation Research: Principles and Applications by Elizabeth Domholdt (Elsevier Science Health Science Div, 2004)

Biomechanics and Pathomechanics

1. Basic biomechanics of the musculoskeletal system by Margareta Nordin and Victor H. Frankle, 2nd edition (Lea and Febiger)
2. Kinesiology of the Human Body: Under Normal and pathological condition by Arthur Steindler, 5th edition (Charles C Thomas, 1977)
3. Joint Structure & Function :A comprehensive analysis by Cynthia C Norkin, Pamela K Levangie (Jaypee Brothers, 2006)
4. Brunnstrom's Clinical Kinesiology by Laura K. Smith & Don Lehmkuh, 5th edition (F A Davis, 1996)
5. The Physiology of the Joints by Kapandji & Matthew J Kendel (Churchill Livingstone, 2008)
6. Clinical Biomechanics of the Spine by Augustus A White & Manohar M Panjabi, 2nd Edition (Lippincott Williams & Wilkins; 1990)
7. Kinesiology :The mechanics and Pathomechanics of Human Movement by Carol Oatis (Lippincott Williams & Wilkins; 2008)
8. Kinesiology: Application to pathological motion by Soderberg, 2nd Edition (Wiliams & Wilkins, 1997)

Ergonomics

1. Industrial Therapy by Glenda L. Key, 1st Edition (Mosby)

Nutrition and Exercise physiology

1. Exercise Physiology by Mc Ardle, Katch & Katch (Lippincott Williams and Wilkins, 2000)
2. Exercise Physiology: Exercise, Performance, and Clinical Applications by Robert A. Roberts and Scott O Roberts William C Brown, 1997)
3. Clinical Exercise Testing and Prescription Theory and Applications by Scott O. Roberts, Peter Hanson (C RC Press, 1997)

Manual Therapy

1. Grieve's modern manual therapy: The vertebral column By Jeffrey Boyling and Grad Dip Man Ther (Churchill Livingston)
2. Concern manual therapy books

Exercise Therapy

1. Therapeutic Exercise: Treatment Planning for Progression by Francis E. Huber, Christly. Wells (W.B. Saunders Company, 2006)
2. Therapeutic Exercise: Foundations and Techniques by Carolyn Kisner and Lynn Allen Colby (W.B. Saunders Company, 2007)
3. Therapeutic Exercise, Moving Towards Function by Carrie M. Hall and Lori Thein Brody (Lippincott Williams & Wilkins, 2004)

Electrotherapy

1. Integrating physical agents in rehabilitation by Bernadette Hecox and John Sanko, 2nd edition (Pearson prentice hall 2006)
2. Physicals agents in rehabilitation: from research to practical by Michell H. Cameron, 2nd edition (Saunders and Elsevier, 2003)
3. Therapeutic Modalities for Allied Health Professionals by William E. Prentice and Frank Underwood (McGraw-Hill, 1998)

Electrophysiology

1. Electromyography in clinical practice by Michael J. Aminoff, 3rd edition (Churchill Livingstone)
2. Clinical neurophysiology by UK Misra and Kalita, 2nd edition (Churchill Livingstone)
3. Electro diagnosis in diseases of nerve and muscle: Principles and practice by Jun Kimura (Oxford university press)
4. The ABC of EMG: A practical introduction to Kinesiological electromyography by Peter Conrad (Noroxon Inc. USA 2005)
5. Integrating physical agents in rehabilitation by Bernadette Hecox and John Sanko,2nd edition (Pearson prentice hall 2006)

Physical and functional assessment

1. American physical therapy association. Guide to physical therapy practice, 2nd edition 2001.
2. Physical rehabilitation (4& 5th edition) by Susan B O Sullivan and Thomas J Schmitz. (Jaypee publication)
3. International Classification of Functioning, disability and health: Short version. (IT'S Publication)
4. Professionalism in physical therapy: History, Practice and Development by Laura Lee Swisher and Catherine G.Page, (Elsevier publication 2005)
5. Effective Documentation for Physical Therapy Professionals, by Eric Shamus and Debra (McGraw Hill company2004)
6. Physical therapy Documentation: From examination to outcome by Mia Erickson, Ralph Utzman (Slack incorporated 2008)
7. Writing SOAP Notes with Patient / Client management Formats by Ginge Kettenbach, Ph. D., PT, 3rd Edition, 2004 ,F.A. DAVIS COMPANY. Philadelphia
8. Practical Evidence-Based Physiotherapy Rob Herbert, Gro Jamtvedt, Judy Mead, Kare Birger Hagen Elsevier Butter worth Heinemann; Oxford UK (2005)
9. Guide to Evidence-Based Physical Therapy Practice by Dianne V. Jewell, PT, PhD, Virginia Commonwealth University, Virginia
10. Hand book of neurologic rating scales by Robert M.Herndon, 2nd edition , (Demos publications 2005)
11. Bickerstaff's neurological examination in clinical practice by John Spillane, 6th

edition (Blackwell science limited 1996)

12. Physical rehabilitation laboratory manual: Focus on functional training by Susan B O Sullivan and Thomas J Schmitz. (F.A. Davis Company)
13. The development of the infant young child: Normal and Abnormal by R.S. Illingworth, 9th edition (Churchill Livingstone 1996)
14. Functional Movement Reeducation – A contemporary model for stroke rehabilitation by Susan Ryerson and Kathryn Levit (Churchill Livingston and Elsevier, 1997)

Physiotherapy Interventions

1. Robert Pool, Wenzel Geissler. Medical Anthropology (Understanding Public Health). 2006 OPEN

UNIVERSITY PRESS. ISBN13: 9780335218509

2. Mechanics JI, Kushner RF, editors. Creating a Lifestyle Medicine Center: From Concept to Clinical Practice. Springer Nature; 2020 Sep 4. ISBN: 978-3-030-48087-5

3. Park's Textbook of Preventive and Social Medicine, 25th Edition 2019. Publisher: Banksides Bhanot Publishers Year: 2019. ISBN: 9789382219156

4. COOK, A. M., & POLGAR, J. M. (2015). Assistive Technologies: Principles and Practice. 4th ed. Mossouri. ISBN: 978-0-323-09631-7

5. Bella J. May, Margery A. Lockard. 2011. Prosthetics & orthotics in clinical practice: A Case Study Approach, F. A. Davis Company. ISBN-13: 978-0-8036-2257-9

6. Shrawan Kumar. 2007 Biomechanics in Ergonomics 2nd Edition, Taylor & Francis. e-book ISBN: 9780429125133

7. Katrin Kroemer Elbert Henrike Kroemer Anne D. Kroemer Hoffman 2018. Ergonomics: How to Design for Ease and Efficiency. 3rd Edition. Academic Press, ISBN: 9780128132968

8. Susan B. O'Sullivan, Thomas J. Schmitz, George D. Fulk. 2014. Physical Rehabilitation, 6th edition. F.A. Davis Co. ISBN 9780803625792

9. Bharati Vijay Bellare, Pavithra Rajan, Unnati Nikhil Pandit. 2018. Textbook of Preventive Practice and Community Physiotherapy. Vol 1 & 2. ISBN: 9789352703258 & ISBN: 9789352704033

10. Dale Avers, Rita Wong. Guccione's Geriatric Physical Therapy. 4th Edition 2019. Mosby. ISBN: 9780323609128

11. Jill Mantle Jeanette Haslam Sue Barton. Physiotherapy in Obstetrics and Gynaecology, 2nd Edition. 2004. Butterworth-Heinemann ISBN: 9780750622653

12. Giammatteo, Sharon; Giammatteo, Thomas. Functional Exercise Program for Women's and Men's Health Issues (International College of Integrative Manual Therapy Wellness). 2001. North Atlantic Books ISBN 13: 9781556433665

13. American College of Sports Medicine. ACSM's exercise testing and prescription. Lippincott, Williams & Wilkins; 2017. ISBN/ISSN: 9781496339065

14. Mary M. Yoke and Carol Armbruster. Methods of Group Exercise Instruction. 2019. Human Kinetics, Inc. ISBN: 9781492571766

17. Dean E, Al-Obaidi S, De Andrade AD, et al. The First Physical Therapy Summit on Global Health: implications and recommendations for the 21st century. Physiotherapy Theory Pract. 2011;27(8):531-547.

18. Dean E, Skinner M, Myezwa H, et al. Health Competency Standards in Physical Therapist Practice. Phys Ther. 2019;99(9):1242-1254.

19. Johanna Fritz, Lars Wallin, Anne Söderlund, Lena Almqvist & Maria Sandborgh (2020) Implementation of a behavioural medicine approach in physiotherapy: impact and sustainability, Disability and Rehabilitation, 42:24, 3467-3474

1. Physiotherapy in Obstetrics and Gynaecology ; Margaret Polden Jill Mantle Jay Pee
2. Text book of Obstetrics – D.C. Dutta
3. Women's Health: A Textbook for physiotherapists- Ruth Sapsford
4. Women's Sports Medicine and Rehabilitation- 1st edition. Swedan N. An AspenPublication
5. Textbook of Female Urology and Urogynaecology- 3rd edition. Cardozo L; Staskin D.CRC press 2010.
6. Evidence–Based Physical Therapy for the Pelvic Floor: Bridging Science and Clinical Practice- 1st edition. Bo, K., Berghmans, L.C.M., Van Kampen, M., Morkved, S.Churchill Livingstone 2007.
7. The new Harvard guide to womens health- 1st edition. Carlson KJ; Eisenstat SA; Ziporyn T. Belknap Press 2004.
8. Physiopedia- https://www.physio-pedia.com/Physical_Activity_and_Pregnancy

2.16 Reference books

Same as 2.18

2.17 Journals

NCAHCP accepted journals i.e. those included in:

i. Medline

ii. PubMed Central

iii. Embase

iv. Scopus

v. Science Citation Index

vi. Science Citation Index Expanded

vii.Directory of Open Access Journals (DOAJ)

Scopus Indexed Journals in Physiotherapy

1. ACSM's Health and Fitness Journal.
2. Acute Pain
3. Advances in Medical Sciences
4. American Journal of Physical Therapy and Rehabilitation
5. Archives of Osteoporosis
6. Biology of Sport
7. Canadian Journal of Respiratory Therapy
8. Clinical Journal of Sports Medicine
9. Clinical Rehabilitation
10. European Journal of Pain Supplements
11. European Journal of Sport Science
12. European Review of Aging and Physical Activity.
13. Exercise and Sport Sciences Reviews
14. Family and Community Health
15. Foot and Ankle Clinics
16. Foot and Ankle International
17. International Journal of Adolescence and Youth
18. International Journal of Diabetes in Developing Countries
19. International Journal of Physiotherapy and Rehabilitation
20. Journal of Exercise Science and Fitness
21. Journal of Men's Health.
22. Journal of Musculoskeletal Research

2.18 Logbook

Every student shall maintain a record of skills (Log book) he/she has acquired during each year of training period certified by the various heads of the department where he/she has undergone training. The Head of the department shall scrutinize the log book once in every three months. At the end of each year, the candidate should summarize the contents and get the log book certified by the Head of the Institution.

3 EXAMINATIONS

3.1 Eligibility to appear for exams

There shall be 80% attendance in theory and practical/clinical separately to appear for the University examination. The candidate must secure the minimum marks of 50% in internal assessment in theory and practical in a particular subject in order to be eligible to appear in the university examination of the subject.

3.2 Schedule of Regular/Supplementary exams

There will be two examinations in a year (regular and supplementary), to be conducted as per notification issued by university from time to time.

Supplementary examination shall be conducted by the university for the benefit of unsuccessful candidates. The supplementary examination shall be conducted within six months from the date of publication of results of regular examination.

3.3 Scheme of examination showing maximum marks and minimum marks

SUBJECT	THEORY		THEORY INTERNAL		PRACTICAL		PRACTICAL INTERNAL		VIVAS		TOTAL	
	Max Marks	Min. Marks for pass	Max Marks	Min. Marks for pass	Max Marks	Min. Marks for pass	Max Marks	Min. Marks for pass	Max Marks	Min. Marks for pass	Max Marks	Min Marks for Pass
Paper I Applied Basic Sciences	100	50	50	25	***	***	***	***	***	***	150	75
Paper II Physiotherapeutics	100	50	50	25	100	50	50	25	50	25	350	175
Paper III Physiotherapy in OBSTETRICS AND GYNAECOLOGY	100	50	50	25	100	50	50	25	50	25	350	175
Dissertation	APPROVED/NOT APPROVED								100	50	100	50

3.4 Papers in each year

As in 3.2

3.5 Details of theory exams

Question paper pattern for MPT theory examination

Subjects having maximum marks = 100		
Type of question	**Number of questions**	**Marks for each question**
Structured Essays	**2**	**20**
Brief structured essay	**10**	**6**

BROAD GUIDELINES

Paper	Subjects		Distribution of marks	Total marks
Paper I Applied Basic Sciences	1	Bio Statistics and Research Methodology	30	100
	2	Biomechanics and Pathomechanics	30	
	3	Ergonomics	10	
	4	Nutrition and Exercise Physiology	30	
Paper II Physiotherapeutics	1	Manual therapy	25	100
	2	Exercise therapy	25	
	3	Electro therapy	25	
	4	Electrophysiology	25	
Paper III(Speciality) Physiotherapy assessment	1.	.	15	100
	2.		15	
	3.		30	
	4.	Physiotherapy interventions	40	

Structured Essay should be explanatory and brief structured Essay should be descriptive.

3.6 Model question paper for each subject with question paper pattern

MASTER OF PHYSIOTHERAPY (MPT) DEGREE FINAL EXAMINATION

PAPER I – APPLIED BASIC SCIENCES

Q.P. Code:

Time: Three Hours **Maximum: 100 marks**

Answer ALL questions in the same order

I. Long Essay (2 x 20 = 40 marks)

1. Explain in detail about the functional adaptation of bone under pathological conditions.
2. Discuss about exercise in different altitudes and various climatic conditions.

II. Short notes: (10 x 6 = 60 marks)

1. Back care for physiotherapist in clinics
2. Job analysis
3. Energy expenditure during walking and running
4. Ergonomic modifications for a software professional
5. DOMS
6. Plyometrics
7. Pre-competition meal
8. Hallux valgus
9. Methods of sampling
10. Hypothesis testing

MASTER OF PHYSIOTHERAPY (MPT) DEGREE FINAL EXAMINATION

PAPER II – PHYSIOTHERAPEUTICS

Q.P. Code:

Time: Three Hours **Maximum: 100 marks**

Answer ALL questions in the same order

I. Long Essay (2 x 20 = 40 marks)

1. Describe the types of Mckenzie's syndromes, use of repeated movements in Mckenzie's method of spinal examination and explain the treatment principles for derangement syndrome
2. Explain in detail the neurophysiological principles and treatment principles of proprioceptive neuromuscular facilitation techniques. Describe about various proprioceptive neuromuscular facilitation techniques to improve stability

II. Short notes (10 x 6 = 60 marks)

1. Neural mobilization
2. EMG changes in peripheral neuropathies
3. Principles of Muscle Energy Techniques
4. Concave- convex rule and its importance in manipulation
5. Russian currents
6. Iontophoresis
7. Pain assessment
8. Functional Electrical Stimulation
9. Skin fold measurement
10. Close pack and loose pack position

MASTER OF PHYSIOTHERAPY (MPT) DEGREE FINAL EXAMINATION

PHYSIOTHERAPY in OBSTETRICS AND GYNAECOLOGY

Q.P. Code:

Time: Three Hours **Maximum: 100 marks**

Answer ALL questions

I. Long Essay (2 x 20 = 40 marks)

1. Discuss in detail about the physiotherapy role in labor.
2. Define incontinence. Explain about the types, assessment and its management.

II. Short notes (10 x 6 = 60 marks)

1. Kegel's exercise
2. What is normal pressure in the bladder?
3. List out the disorders associated with menstruation.
4. Puberty
5. Hoffman's exercise for nipple
6. Vaginal hygeine
7. List down the criteria for normal labor
8. Indications for C-section
9. Instruments to assess the pelvic floor muscle strength.
10. List down the antenatal complications.

3.7 Internal assessment component

a. There shall be a minimum of 3 periodic assessments, for theory and practical including viva separately, of which the final one shall be in the KUHS pattern and is mandatory.

b. Average of the marks of the KUHS pattern examination and the best out of the remaining periodical assessments shall be taken as internal assessment mark of the candidate

c. The class average of internal assessments mark of theory and practical should not exceed 75% of Maximum marks

d. The class average of internal assessment for an examination shall be calculated based on the total number of candidates in a particular batch appearing for that internal

assessment examination.

e. The candidate must secure the minimum marks of 40% for internal assessment in theory, practical and viva voce in a particular subject order to be eligible to appear in the university examination of the subject.

3.8 Details of practical/clinical practicum exams

PRACTICAL 1 - Physiotherapeutics

(Practical exam is emphasized only on Exercise and Electrotherapy)

- One long case - 60 marks
- One short case - 40 marks
- Viva - 50 marks

PRACTICAL 2 – Physiotherapy in Community Health & Geriatrics

(Practical exam is emphasized only on Physiotherapy assessment and Interventions)

- One long case - 60 marks
- One short case - 40 marks
- Viva - 50 marks

3.9 Number of examiners (Internal & External) and their qualifications

There will be two examiners for each subject where practical/ or viva to be conducted. One examiner (INTERNAL EXAMINER) is preferably from the same institution or as decided by the KUHS and the other examiner will be from another university (EXTERNAL EXAMINER). The examiners should have at least 5 years of teaching experience after post graduation.

3.10 Details of viva:

Wherever viva is prescribed the same will be conducted by the internal and external examiners appointed for practical examinations.

4 INTERNSHIP

Not applicable

5 ANNEXURES

5.1. **Check Lists for Monitoring:** Log Book, Seminar, Assessment etc. to be formulated by the curriculum committee of the concerned Institution