



**MAHARASHTRA UNIVERSITY OF HEALTH
SCIENCES, NASHIK**

SYLLABUS FOR

BACHELOR OF PHYSIOTHERAPY (B.P.Th.)

DEGREE COURSE

This syllabus is applicable from the academic year 2012-2013

PREAMBLE

Physiotherapy or Physical Therapy (P.T.) is a **Movement Science** with an established theoretical and scientific base and widespread clinical applications in the **Prevention, Restoration & Rehabilitation, Maintenance and Promotion of optimal physical function**. Physiotherapists **diagnose and manage movement dysfunction** and enhance physical and functional abilities. This physical dysfunction may be the sequelae of involvement of any of the systems like Musculoskeletal, Neurological, Cardiovascular, Respiratory or other body systems.

These practitioners contribute to society and the profession through practice, teaching, administration, and the discovery and application of new knowledge about physiotherapy experiences of sufficient excellence and breadth by research to allow the acquisition and application of essential knowledge, skills, and behaviors as applied to the practice of physiotherapy.

Learning experiences are provided under the guidance and supervision of competent faculty, in both, classroom as well as in clinic. The designed curriculum will prepare the entry-to-practice physiotherapist (PT), to be an autonomous, effective, safe and compassionate professional, who practices collaboratively in a variety of healthcare set ups such as neonatal to geriatric, from critical care to community fitness to sports training and is responsive to the current and future needs of the health care system.

VISION: To create a best possible environment to prepare physiotherapist who shall lead to serve & heal in a variety of healthcare and social settings to provide best quality of life to an individual.

MISSION: To graduate knowledgeable, service-oriented, self-assured, adaptable, reflective practitioners who, by virtue of critical and integrative thinking along with clinical reasoning, lifelong learning, and ethical values, render independent judgments concerning patient /person needs those are supported by evidence; promote the health of the patient or person; and enhance the professional, contextual, and collaborative foundations for physiotherapy practice.

PROFESSIONAL PRACTICE AND ETHICS

(COLLEGE EXAMINATION IN FINAL YEAR)

Total -15 HRS

COURSE DESCRIPTION:

This subject would be taught in continuum from first year to final year. An exam in theory would be conducted only in final year. Professional and ethical practice curriculum content addresses the Knowledge, Skills and Behaviors required of the physiotherapist in a range of practice relationships and roles. The course will discuss the role, responsibility, ethics administration issues and accountability of the physical therapists. The course will also cover the history and change in the profession, responsibilities of the professional to the profession, the public and to the health care team. This includes the application of professional and ethical reasoning and decision-making strategies, professional communication.

OBJECTIVES:

At the end of the course the candidate will be compliant in following domains:

Cognitive:

- a) Be able to understand the moral values and meaning of ethics
- b) Will acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor:

- a) Be able to develop psychomotor skills for physiotherapist-patient relationship.
- b) Skill to evaluate and make decision for plan of management based on sociocultural values and referral practice.

Affective:

- a) Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals.
- b) Be able to develop bed side behavior, respect & maintain patients' confidentiality.

SYLLABUS

Sr. No.	Topics	Didactic Hours	Supervision Hours	Total Hours
1.	Ethical code of conduct	03	10	15
2.	Communication skills			
	a. Physiotherapist -Patient Relationship b. Interviewing -Types of interview, Skills of interviewing	01 01		
	TOTAL	05	10	15

PSYCHIATRY (INCLUDING PSYCHOLOGY)

[Didactic 30hrs + Clinical 20hrs]- TOTAL 50HRS

COURSE DESCRIPTION:

The course design increases awareness of psychosocial issues faced by individuals. Their significance at various points on the continuum of health and disability should be emphasised. The course discusses personal and professional attitudes and values as they relate to developing therapeutic relationships. It emphasizes on communication skills for effective interaction with patients, health-care professionals and others. It expects students to identify common psychiatric conditions.

Sr. No.	Topics	Didactic Hours	Clinical Hours	Total Hours
1	PSYCHOLOGY	10	--	10
2	PSYCHIATRY	20	20	40
	TOTAL	30	20	50

OBJECTIVES:

At the end of the course, the candidate will be able to:

Cognitive:

- a. Define the term Psychology & its importance in the Health delivery system, & will gain knowledge of Psychological maturation during human development & growth & alterations during aging process.
- b. Understand the importance of psychological status of the person in health & disease; environmental & emotional influence on the mind & personality.
- c. Have the knowledge and skills required for good interpersonal communication.

Psychomotor:

- a. Enumerate various Psychiatric disorders with special emphasis to movement / Pain & ADLs
- b. Acquire the knowledge in brief, about the pathological & etiological factors, signs / symptoms & management of various Psychiatric conditions.
- c. Understand the patient more empathetically.

III B. P.Th.

SYLLABUS

Transcript Hours- 1400

Sr. No.	SUBJECTS	Theory Hours	Laboratory / Clinical Hours	Total Hours
	PROFESSIONAL PRACTICE			
1	Professional Practice & Ethics (College Examination in final year)	10	005	015
	MEDICAL SCIENCES			
2	Surgery-I (Cardiovascular & Thoracic Surgery, General Surgery & Plastic/Reconstructive Surgery)	030	025	055
3	Surgery-II (Orthopaedics)	040	020	060
4	Medicine-I (Cardiovascular Respiratory Medicine, General Medicine, Rheumatology & Gerontology)	045	010	055
5	Medicine-II (Neurology & Paediatrics)	045	020	065
6	Community Medicine & Sociology	050	010	060
7	Obstetrics & Gynaecology (College Examination)	020	010	030
8	Dermatology (College Examination)	010	-	010
	PHYSIOTHERAPY			
9	Functional Diagnosis & Physiotherapeutic Skills	135	325	460
10	Seminar (including ICF)	-	090	090
11	Supervised clinical practice	-	500	500
	TOTAL	385	1015	1400

PROFESSIONAL PRACTICE AND ETHICS

(COLLEGE EXAMINATION IN FINAL YEAR)

TOTAL -15 HRS

COURSE DESCRIPTION:

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OBJECTIVES:

At the end of the course the student will be compliant in following domains:

Cognitive:

- a) Be able to understand the moral values and meaning of ethics.
- b) Will acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor:

- a) Be able to develop psychomotor skills for physiotherapist-patient relationship.
- b) Skill to evaluate and make decision for plan of management based on sociocultural values and referral practice.

Affective:

- a) Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals
- b) Be able to develop bed side behavior, respect & maintain patients' confidentiality

SYLLABUS

Sr. No.	Topics	Didactic Hours	Visits/ Supervision Hours	Total Hours
1.	Collecting data on psychosocial factors in Medicine / Surgery / Reproductive Health / Paediatrics	04	05	15
2.	Inter professional communication.	03		
3.	Ethics in clinical practice	03		
TOTAL		10	05	15

COMMUNITY HEALTH & SOCIOLOGY

TOTAL 60 HRS

A-COMMUNITY HEALTH

(Didactic- 30 Hours + Visits -10 Hours) Total 40hrs

COURSE DESCRIPTION:

The course is organized to introduce the concept of health care and management issues in Health Services. It will help them in assuming a leadership role in their profession and assume the responsibility of guidance. It will help them assume wider responsibilities at all levels of health services. It will help them in improving their performance through better understanding of the health services at all the levels of community.

OBJECTIVES:

At the end of the course, the candidate shall be able to understand the contents given in the syllabus.

SYLLABUS

Sr. No.	Topics	Didactic Hours
1	GENERAL CONCEPTS & DETERMINANTS OF HEALTH & DISEASES:	04
	a. National & International Definition of Health, Role of Socio-Economic & Cultural Environment in Health & Disease.	1
	b. Epidemiology – Definition & scope, uses with relevance to physiotherapy	1
	c. Environmental Hygiene including man & his surrounding, Occupational & Industrial hygiene, Village & Town Sanitation, Bacteriology of Water, Milk, & Food Hygiene.	2
2	NATIONAL PUBLIC HEALTH ADMINISTRATION	1
3	HEALTHCARE DELIVERY SYSTEM:	2
	a. Healthcare Delivery System of India	
	b. National Health Programmes	
	c. Role of W.H.O.	
	d. Millennium Development Goals for All	
4	PRIMARY HEALTHCARE:	1
	a. Definition	
	b. Principles,	
	c. Elements & its application	
5	EPIDEMIOLOGY OF SOCIO-ECONOMICAL & CULTURAL ISSUES - related to morbidity in relation to the following vulnerable groups.	6
Sr. No.	Topics	Didactic Hours
	a. Women:	1
	i. Pregnant and lactating women, maternal health (ANC,PNC,INC)	
	ii. Perimenopausal women's health: physical & psychological	

B- SOCIOLOGY

Total 20 hrs

COURSE DESCRIPTION:

This course covers the basic knowledge and concepts of sociology to with the aim to help them understand the impact of group, culture and environment on the behavior and health of the patients. Make them realize the importance of the relationship of the physical therapist and the patient and the environment around them.

OBJECTIVES:

At the end of the course, the candidate shall be able to understand the contents given in the syllabus.

SYLLABUS

Sr. No.	Topics	Didactic Hours
1	INTRODUCTION:	1
	Definition & Relevance with Physiotherapy and social factors affecting Health status, Decision Making in taking treatment.	
2	SOCIALIZATION:	1
	Definition, Influence, of Social Factors, on Personality, Socialization in the Hospital & Rehabilitation of the patients.	
3	SOCIAL GROUPS:	1
	Concepts, Influence of formal & informal groups of Health & Diseases, Role of Primary & Secondary Groups in the Hospital & Rehabilitation Setting.	
4	FAMILY:	1
	Influence on human personality, Role of family in health and disease	
5	COMMUNITY ROLE:	1
	Rural & Urban communities in Public Health, Role of community in determining Beliefs, Practices & Home Remedies in Treatment.	
6	CULTURE:	1
	Component's impact on human behavior, Role of community in determining beliefs, practices and health seeking behavior and home remedies	
7	SOCIAL CHANGE FACTORS:	1
	Human Adaptation, Stress, Deviance, Health Programme Role of Social Planning in the improvement of Health & in Rehabilitation.	

OBJECTIVES:**Cognitive:**

At the end of the course, student will be able to:

1. Understand the use of ICF.
2. Acquire the knowledge of human growth and development from new life to birth and adulthood
3. Understand structure and function of nerve and muscle as a base for understanding the electro-diagnostic assessment.
4. Understand the use of appropriate tools or instruments of assessment in Musculoskeletal, Neurological and Cardio-vascular conditions.
5. Understand the theoretical basis and principles of manipulative skills, neurotherapeutic skills and skills of cardiopulmonary care and resuscitation
6. Document results of assessment to evaluate the patient from time to time.

Psychomotor:

Student will be able to:

1. Perform assessment of measures of body structures and functions related to tissue mechanics.
2. Perform assessment of measures of body structures and functions related to motor control affecting activity and participation, quality of life and independence.
3. Perform the skill of electro-diagnosis (SD Curve) and observe skills of EMG and NCV studies, to understand the documentation of finding of these studies.
4. Interpretation and analysis of assessment and findings.
5. Demonstrate skills of manual therapy musculoskeletal, neurotherapeutics and cardiovascular and respiratory skills on models (Laboratory work).

Affective:

Student will be able to:

1. Select appropriate assessment techniques to facilitate safety, sensitive practices in patient comfort and effectiveness.
2. Demonstrate safe, respectful and effective performance of physical therapy handling techniques taking into account patient's clinical condition, need for privacy, resources available and the environment.
3. Follow the principles of appropriate handling technique that is draping, hand placement, body part positioning, manual techniques, lifting and transfer techniques.
4. Communicate with patients and their families/caregivers regarding the need and uses of various assessment techniques.

IV B.P.Th.

SYLLABUS

Transcript Hrs-1465

Sr. No.	Subjects	Theory Hours	Practical / Clinical Hours	Total Hours
	PROFESSIONAL PRACTICE			
1	Professional Practice & Ethics (College Examination)	015	--	015
2	Administration, Management & Marketing (College Examination)	020	--	020
	PHYSIOTHERAPY			
3	Musculoskeletal Physiotherapy	060	140	200
4	Neuro Physiotherapy	065	135	200
5	Cardiovascular-Respiratory Physiotherapy (Including Critical Care)	060	140	200
6	Community Physiotherapy	085	115	200
7	Principles of Bio-engineering (College Examination)	030	-	030
8	Research Methodology & Biostatistics (College Examination)	040	-	040
9	Seminar (including I.C.F.)	-	060	060
10	Supervised clinical practice -During each clinical assignment, the student shall evaluate, functionally diagnose, plan & practice clinical skills on patients in consultation with the qualified physiotherapist staff	-	500	500
	TOTAL	375	1090	1465

PROFESSIONAL PRACTICE AND ETHICS

(COLLEGE EXAMINATION)

Total -60Hrs (I to IV year)

COURSE DESCRIPTION:

This subject will be taught in continuum from first year to final year. An examination will be conducted only in final year. Professional and ethical practice curriculum content addresses the Knowledge, Skills and Behaviors required by the physiotherapist in a range of practice relationships and roles. The course will discuss the role, responsibility, ethics administration issues and accountability of the physical therapists. The course will also cover the history and change in the profession, responsibilities of the professional to the profession, the public and to the health care team. This includes the application of professional and ethical reasoning and decision-making strategies and professional communication.

Sr. No.	Topics	I B.P.Th.	II B.P.Th.	III B.P.Th.	IV B.P.Th.	Total Hours
1	PROFESSIONAL ISSUES & ETHICS	15 hrs	15 hrs	15 hrs	15 hrs	60

OBJECTIVES:

At the end of the course, the student will be compliant in following domains:

Cognitive: The student will

1. Be able to understand the moral values and meaning of ethics
2. Be able to learn and apply ethical code of conduct in fields of clinical practice, learning, teaching, research and physiotherapist-patient relationship
3. Acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals
4. Will acquire the knowledge of the basics in Managerial & Management skills, & use of information technology in professional Practice

Psychomotor: The student will be able to:

1. Develop psychomotor skills for physiotherapist-patient relationship
2. Develop the skill to evaluate and make decisions for plan of management based on sociocultural values and referral practice

Affective: The student will be able to:

1. Develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals
2. Develop bedside behavior, respect & maintain patients' confidentiality

SYLLABUS

Sr. No.	Topics	Didactic Hours	Visits/ Supervision Hours	Total Hours
I B.P.Th.	1. Introduction to the history of Physiotherapy.	02	05	15
	2. Orientation to the curriculum, clinical areas and geographical location.	03		
	3. Concept of morality and ethics	03		
	4. Concept of professionalism and Professional dress code	02		
II B.P.Th.	1. Ethical code of conduct	03	10	15
	2. Communication skills			
	a. Physiotherapist –Patient Relationship b. INTERVIEWING -Types of interview, Skills of interviewing	01 01		
III B.P.Th.	1. Collecting data on psychosocial factors in Medicine, Surgery, Reproductive Health, Paediatrics	04	05	15
	2. Inter professional communication.	03		
	3. Ethics in clinical practice	03		
IV B.P.Th.	1. Roles of Physiotherapist as patient manager, Consultant, Critical inquirer, Educator, Administrator	05	---	15
	2. Laws and regulations	02		
	3. Professional development, competence and expertise	02		
	4. Professional bodies	02		
	5. Ethics in Research	01		
	6. Ethics in Teaching	02		
	7. Role of W.C.P.T. & Council	01		
TOTAL		40	20	60

SYLLABUS

Sr. No.	TOPICS	Didactic Hours	Practical Hours	Total Hours
1	Use of ICF model (Bio, Psycho and Social) to plan Short term and Long term goals in physiotherapy management of health condition of musculoskeletal system <ol style="list-style-type: none"> a. Identification of short term and long term goals based on <ol style="list-style-type: none"> i) Capacity and Performance related to activities and participation to enhance functioning ii) Personal and Environment factors -facilitators and barriers that affect disablement and functioning b. Documentation of disability and functioning c. Red flags- Recognizing signs and symptom 	02	-	02
2	<ol style="list-style-type: none"> a. Introduction to functional scales as outcome measures – Generic and Disease specific. b. Evidence base practice in musculoskeletal health conditions- levels of evidence, clinical application 	01	-	01
3	Biomechanical / Physiological basis of following modes physiotherapy interventions implemented during all three stages of tissue healing - <ol style="list-style-type: none"> a. Electrotherapeutic modes for pain- acute and chronic pain syndromes, swelling, wound healing, re-education b. Therapeutic exercise to alleviate pain, increase mobility, muscle performance (strength) endurance, motor control, muscle length, posture and gait training c. Taping techniques for pain relief , support and posture correction <ol style="list-style-type: none"> i. Principles ii. Indications / Contraindications iii. Types of tapes and terminologies used iv. Techniques 	01	00	01
4	The following topics are applicable to all conditions related to musculo-skeletal dysfunction throughout lifespan in acute care setting , hospital, chronic conditions at home and in community on the basis of:			
Sr. No.	TOPICS			Total Hours

SYLLABUS

Sr. No.	Topics	Didactic Hours	Practical Hours	Total Hours
1.	<p>Features of ICF model (bio, psycho and social) to plan efficient, effective and cost-contained short term and long term goals to enhance functioning in a patient with health condition of nervous system.</p> <ul style="list-style-type: none"> a. Clinical utility of bi-directional relationships among the ICF model's domain b. Environment and Personal factors- Facilitators and Barriers that affect disablement and functioning c. Capacity and Performance related Activities and Participation to enhance Functioning d. Set patient specific goals and expected outcome with clinical reasoning e. Documentation of disability and functioning Red flags-recognizing signs and symptoms 	02	--	02
2.	Theoretical basis of motor control and learning to understand various neurophysiotherapeutic approaches.	02	--	02
3.	<ul style="list-style-type: none"> a. Plasticity of the intact brain <ul style="list-style-type: none"> i. motor learning ii. training iii. plasticity <ul style="list-style-type: none"> Plasticity following brain lesion <ul style="list-style-type: none"> • nature of spontaneous recovery • effect of environment behavior and recovery • adaptation of motor performance • muscle adaptation b. Strength training and physical conditioning in neuro rehabilitation to optimize functional performance c. Skill acquisition in restoration of functional performance <ul style="list-style-type: none"> • information, instruction, demonstration • feedback • practice 	01	--	01
		02		02
		02	--	02
4.	Quality of Life scales & Independence Measures	02	--	02
	The following topics are applicable to all conditions related to Neuromuscular dysfunction throughout lifespan in acute care setting, hospital, chronic conditions at			

CLINICAL

SUPERVISED CLINICAL PRACTICE:

During the supervised clinical practice, student should be able to successfully execute the competencies in assessment, physical diagnosis on ICF basis, plan of care and therapeutic interventions relating to neuromuscular dysfunctions. Student should become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of conditions (surgical, non-surgical, pediatric and geriatric). Student should learn to objectively perform these skills under the supervision of trained physical therapists. Student is required to keep a performance record of all listed competencies during the clinical practice and successfully perform on real patients during the final evaluation of the course.

CLINICAL COMPETENCIES:

A) COMPETENCY IN ASSESMENT AND CLINICAL REASONING :

Student should be able to apply the ICF framework in selecting measurement tools to ensure a holistic approach to evaluation of body structure and function, activities, participation; and select and administer assessment/evaluation tools and techniques suitable for the patient's problems and condition(s) based on the best available evidence and interpret the information obtained demonstrating evidence-based decision-making and safe handling technique such as:

1. Risk factor screening (Red flags & Yellow flags).
2. Assessment of Neuromuscular dysfunction.
3. Interpretation of Radiological, Electrophysiological, Hematological and Biochemical investigations.
4. Identification and quantification of environmental and home barriers and facilitators
5. Identification and analysis of body mechanics during self-care, home management, work, community, tasks, or leisure activities.
6. Identification and analysis of ergonomic performance during work (job/school/play):
7. Assessment of Quality of Life through use of appropriate questionnaire and generic or disease-specific scales (nice to know)
8. Identification and prioritization of impairments in body functions and structures, and activity limitations and participation restrictions to determine specific body function and structure, and activities and participation towards which the intervention will be directed
9. State the evidence (patient/client history, lab diagnostics, tests and measures and scientific literature) to support a clinical decision.
10. Determine the predicted level of optimal functioning and the time required to achieve that level.
11. Recognize barriers that may impact the achievement of optimal functioning within a predicted time frame and ways to overcome them when possible.

COMMUNITY PHYSIOTHERAPY

(Didactic 85 hrs + Clinical 115 hrs) **TOTAL 200 HRS**

COURSE DESCRIPTION:

Community Physiotherapy describes the roles & responsibilities of the Physiotherapist as an efficient member of the society. This component introduces the Physiotherapist to a proactive preventive oriented philosophy for optimization & betterment of health.

Community Physiotherapy is not apart from the other sections of Physiotherapy described in this syllabus. In fact, it is the in-depth application of these same aspects viz. Musculoskeletal, Neurological & Cardio Vascular & Respiratory to the entire society. This is done by understanding the sections & sub sections of the societies, the national & international health policies, role of Government & Non Government Organizations.

The applications of Community Physiotherapy are not limited to conditions & dysfunctions but as attributed to promotion of Health & rehabilitation in Communities like Elderly, Women, and Occupational Health etc.

Sr. No.	Topic	Didactic Hours	Clinical Hours	Total Hours
1	HEALTH PROMOTION	10	15	25
2	WOMEN'S HEALTH	20	20	40
3	GERIATRICS HEALTH	20	20	40
4	REHABILITATION	11	20	31
5	HEALTHCARE DELIVERY & DISASTER MANAGEMENT	04	-	04
6	INDUSTRIAL HEALTH	20	20	40
7	SYNOPSIS	-	20	20
TOTAL		85	115	200

OBJECTIVES:

At the end of the course the student shall:

Cognitive:

Be able to describe:

- The general concepts about health, disease and physical fitness.
- Physiology of aging process and its influence on physical fitness.
- National policies for the rehabilitation of disabled – role of PT.
- The strategies to assess prevalence and incidence of various conditions responsible for increasing morbidity in the specific community – role of PT in reducing morbidity, expected clinical and functional recovery, reasons for non-compliance in specific community environment & solution for the same.
- The evaluation of disability and planning for prevention and rehabilitation.
- Rehabilitation in urban and rural set up.
- Able to be a part of decision making team regarding the policies for the welfare of special communities & on issues of disability