

STUDY & EVALUATION SCHEME
OF
BACHELOR OF PHYSIOTHERAPY
(BPT-III YEAR/ V SEMESTER)

[Applicable w.e.f. Academic Session 2015-16 till revised]



INTEGRAL UNIVERSITY, LUCKNOW
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Syllabus approved by Board of Study, Faculty Board, Academic Council, Executive Council of the Integral University, Lucknow

STUDY & EVALUATION SCHEME
BACHELOR OF PHYSIOTHERAPY (BPT)
(w.e.f. July 2015)

III - Year

V - Semester

S. No.	Subject Code	Subject Title	Periods per week			Credits	Evaluation Scheme				Subject Total
			L	T	P		Sessional		Exam		
							CT	TA	Total	ESE	
1.	PT 301	General Surgery	3	1	0	4	25	15	40	60	100
2.	PT 302	General Orthopaedics & Traumatology	3	1	0	4	25	15	40	60	100
3.	PT 303	Manual Therapy	3	1	0	4	25	15	40	60	100
4.	PT 304	Biomechanics & Kinesiology	3	1	0	4	25	15	40	60	100
5.	PT 305	Manual Therapy - Lab	0	0	4	2	30	30	60	40	100
6.	PT 306	Biomechanics & Kinesiology-Lab	0	0	2	1	30	30	60	40	100
7.	PT 307	Seminar on Clinical Issues	0	2	0	2	25	25	50	00	50
8.	PT 308	Clinical Training	0	0	10	5	25	25	50	00	50
Total			12	06	16	26	210	170	380	320	700

L: Lecture

T: Tutorials

P: Practical

CT: Class Test

TA: Teacher Assessment

ESE: End Semester Examination

Sessional Total: Class Test + Teacher Assessment

Subject Total: Sessional Total + End Semester Examination (ESE)

SUBJECT: GENERAL SURGERY

SUBJECT CODE: PT 301

(w.e.f. July 2015)

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COURSE DESCRIPTION

This course follows the basic course on Anatomy, Physiology, Psychology, Pathology, and provides knowledge about relevant aspects of General Surgery, Plastic Surgery, Pediatrics, E.N.T. Ophthalmology.

COURSE OBJECTIVES

The objectives of this course are that students at the end of course should have a broad understanding about common medical diseases which they would be handling as a physiotherapist. They should have a brief idea about Etiology, Pathology and Type and Degree of Disability the patient will have as result of the disease, so that he/she as a Physiotherapist with Physician should help the patient to achieve cure and/or ameliorate his/her illness and sufferings.

UNIT I: General Surgery & infections

1. Wound(basic principles of wound healing ,types and management)
2. Ulcer
3. Abscess, Sinus
4. Infection (Carbuncle, Boils, Cellulitis)
5. Tetanus

UNIT II: Burn & Plastic surgery

1. Burn
2. Scar & Cyst
3. Basics of plastic surgery
4. Skin grafting
5. Shock (types Clinical feature and management)

UNIT III: Abdominal surgery

1. Cholecystectomy & Hysterectomy
2. Nephrectomy & Appendectomy
3. Prostatectomy & Mastectomy
4. Cystectomy & Colostomy
5. Hernia

Unit IV: ENT

1. Sinusitis & Rhinitis
2. ASOM & CSOM
3. Otosclerosis & Meneire's disease
4. Pharyngitis & laryngitis
5. Deafness

UNIT V: EYE

1. Basic Sciences – Anatomy, Physiology of Eye
2. Physiological & Refraction Optics
3. Refractive error – Myopia, Hypermetropia, Astigmatism
4. Squint - Ocular motility disorder
5. Lens - Cataract
6. Cornea and Sclera- Ulcer, degeneration, Keratoplasty
7. Miscellaneous- Brief about Glaucoma, Uvea and Retinal Disorder

RECOMMENDED BOOKS:

1. A Practical Guide to Operative Surgery: S. Das
2. Short practice of Surgery: Baily and Love
3. Principle of Surgery: Schwartz
4. Concise book of general Surgery by Aggrawal, N. K.
5. Essential of Surgery by Aggrawal, S.B.
6. Surgery.. A clinical Approach by Bongard, Fred S.
7. Many Jane Gray, J. A. Merill.
8. General Surgical Operations by R. M. Kirk and R.C.N. Williamson.
9. Text book of Ear, Nose & Throat disease By Mohammad Maqbool
10. A text of Clinical Ophthalmology By

SUBJECT: GENERAL ORTHOPAEDICS & TRAUMATOLOGY

SUBJECT CODE: PT 302

(w.e.f. July 2015)

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COURSE DESCRIPTION

Following the basic science and clinical science course, this course introduces the student to the orthopedic conditions which commonly cause disability. Particular effort is made in this course to avoid burdening the student with any detail pertaining to diagnosis which will not contribute to their understanding of the limitations imposed by orthopedic pathology on the functioning of the individual.

COURSE OBJECTIVES:

The objective of this course is that after the lectures & demonstration, in addition to clinics the student will be able to demonstrate an understanding of orthopaedic conditions causing disability and their management.

In addition the student will be able to fulfill with 75% accuracy (as measured by written, oral & practical internal evaluations) the following objectives of the course.

COURSE OUTLINE:

UNIT I: General Orthopaedics:

1. Basic concept of bone and joint infections (Clinical examination, investigation, management).
2. Osteomyelitis & infectious arthritis
3. T.B of joint and spine.
4. General principle of Bone Tumors & Common benign and malignant tumor of bones

UNIT II: Metabolic and other Non traumatic disorder of bone:

1. Osteomalacia & Rickets
2. Osteoporosis
3. Paget's disease & Osteopetrosis
4. Osteonecrosis & Osteochondrosis.

UNIT III: Traumatology (Fracture):

1. Basics of fracture(Healing, clinical & radiological feature of fracture)
2. Complication of fracture & basic principle of fracture management
3. Common fracture of long bone of U/L (Humerus, Radius, Ulna, Metacarpal & Phalanges)
4. Common fracture of long bone of L/L (Femur, Tibia, Fibula, Metatarsal, & Phalanges)

UNIT IV: Traumatology (Fracture, Dislocation & Soft tissue injury):

1. Common fracture of spine (Cervical, Thoracic, Lumbar)
2. Basic concept of dislocation, Ligament, Tendon , Muscle injury
3. Shoulder & Elbow
4. Hip & Patella

UNIT V: Common Orthopaedic Surgery:

1. Arthodesis and Arthroplasty.
2. Bone grafting and Tendon transfer.
3. Osteotomy and Arthroscopy.
4. Amputation (Basic principle, level, indication contraindication complication)

RECOMMENDED BOOKS:

1. Textbook of Orthopaedics: Kotwal and Natrajan
2. Essential Orthopaedics: Maheshwari
3. Outline of Fracture: Adams
4. Apley, Systems of Orthopaedics and Fracture
5. Essential Clinical Orthopaedics by John Ebenezer

SUBJECT NAME: MANUAL THERAPY

SUBJECT CODE: PT 303

(w.e.f. July 2015)

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Course Description and Objectives: This course includes a detailed study of some special techniques of treatment used in Physiotherapy that will help to make students able to treat problems that are related to different systems of the body.

UNIT-I Basic Concepts in Manual Therapy (6 hrs)

1. History of manual therapy.
2. Definition of manual therapy, mobilization and manipulation and its uses.
3. Theoretical Basis for manual Therapy
 - a. Anatomy and biomechanics of the joints.
 - b. Effects of manual therapy.
 - c. Biomechanical principles in manual therapy
4. Implementation of manual therapy over the human body.

UNIT-II Introduction to Joint Mobilization Techniques (10 hrs)

Basic concepts of the followings-

1. Maitland concepts and techniques.
2. Mulligan concepts and techniques.
3. McKenzie concepts and techniques.

UNIT-III Introduction to Soft Tissue Mobilization Techniques: (10 hrs)

Basic concepts of the followings-

1. Cyriax concepts and techniques
2. Muscle energy technique
3. Positional Release Technique
4. Taping Technique

UNIT- IV Manual Therapy in Cardio-Pulmonary (6 hrs)

1. Breathing Exercise techniques.
2. Self Assisted Coughing Techniques.
3. Postural drainage, its indications and contraindications and its applications.
4. Respiratory muscle training.
5. Airway clearance technique.
 - i. Active cycle of breathing technique.
 - ii. Autogenic drainage technique.
 - iii. PEP techniques.

UNIT-V Manual Therapy in Neurology

(8 hrs)

Basic concepts of the followings-

1. Proprioceptive Neuromuscular Facilitation
Conceptual framework, principle of Proprioceptive neuromuscular facilitation (PNF) techniques, including indications, therapeutic effects and precautions.
2. Neural Mobilization: Buttler concepts and techniques
3. Roods Approaches
4. Transfer Technique

RECOMMENDED BOOKS:

1. Therapeutic Exercise by Carolyn Kisner
2. S Brent Brotzman, Kevin E Wilk clinical orthopaedic rehabilitation
3. Kessler, management of common musculoskeletal disorders.
4. Positional Release technique- Leon Chaitow
5. Neurodynamics mobilization technique- Buttler.
6. Muscle Energy techniques- Leon Chaitow
7. Physical Therapy of the Cervical and Thoracic Spine by Grant
8. Grieve's Modern Manual Therapy
9. Science and Practice of Manual therapy by Eyal Lyderma
10. Motor control by ShummwayCook.

SUBJECT NAME: BIOMECHANICS & KINESIOLOGY

SUBJECT CODE: PT 304

(w.e.f. July 2015)

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COURSE DESCRIPTION:

The course involves a description of principles of biomechanics and their application in musculoskeletal function and dysfunction.

COURSE OBJECTIVES:

The students will be able to tailor an effective treatment programme using biomechanical principles

COURSE OUTLINE

Unit I: Arthrology and Kinematics, Kinetics:

8hours

1. Shoulder complex (Glenohumeral, Sternoclavicular, Acromioclavicular, and Scapulothoracic).
2. Elbow and forearm (Superior Radio ulnar, Radiohumeral & Ulna humeral).

Unit II: Arthrology and Kinematics, Kinetics:

8hours

1. Wrist complex (Radio carpal & Intercarpal)
2. Hand complex (Carpometacarpal, Metacarpophalange)

Unit – III: Arthrology and Kinematics, Kinetics:

8hours

- a. Hip
- b. Pelvis complex (Sacroiliac joint)

Unit –IV: Arthrology and Kinematics, Kinetics:

8hours

- a. Knee (Tibiofemoral & Patellofemoral)
- b. Ankle & Foot Complex (Subtalar,Tarsometatarsal,Metatarsophalangeal,l)

Unit – V Arthrology and Kinematics, Kinetics:

8hours

- a. Cervical
- b. Thorax
- a. Lumbar

RECOMMENDED BOOKS:

1. Joint Structure and Function – A comprehensive Analysis, By Cynthia Norkins.
2. Clinical Kinesiology for Physical Therapist Assistants, JP Bros Medical Publishers, Bangalore, 1st Indian Ed 1997
3. Basic Biomechanics Explained - Low & Reed - Butterworth Heinmann.
4. Kinesiology: Applied to Pathological Motion - Soderberg Lippincott
5. Therapeutic Exercise by Carolyn Kisner, F. A. Davis.
6. Basic Biomechanics. Nordin.
7. Basic Biomechanics & clinical Kinesiology. Otis
8. Biomechanics of Human Movement. D Winter

SUBJECT NAME: MANUAL THERAPY LAB
SUBJECT CODE: PT 305
(w.e.f. July 2015)

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The course involves hands on demonstrations of manual therapy techniques over whole body:

- | | |
|---------------------------------|----------|
| 1. Maitland technique | (5 hrs) |
| 2. Mulligan technique | (5 hrs) |
| 3. McKenzie technique | (5 hrs) |
| 4. Cyriax technique | (5 hrs) |
| 5. Buttler technique | (5 hrs) |
| 6. Muscle energy technique | (5 hrs) |
| 7. Positional Release Technique | (5 hrs) |
| 8. Taping Technique | (5 hrs) |

The course also involves practical sessions & application of Neuro-manual therapy techniques over body:

- | | |
|--|----------|
| 1. Roods Approaches | (3 hrs) |
| 2. Transfer Technique | (3 hrs) |
| 3. Proprioceptive Neuromuscular Facilitation | (3 hrs) |
| 4. Transfer Technique | (1 hrs) |

The course also involves practical sessions & application of Cardio Pulmonary manual therapy techniques over body:

- | | |
|--|----------|
| 1. Breathing Exercise techniques. | (2 hrs) |
| 2. Self Assisted Coughing Techniques. | (2 hrs) |
| 3. Postural drainage, its indications and contraindications. | (2 hrs) |
| 4. Respiratory muscle training. | (2 hrs) |
| 5. Airway clearance technique. | (2 hrs) |

RECOMMENDED BOOKS:

1. Therapeutic Exercise by Carolyn Kisner
2. Principles of Exercise Therapy-Dena Gardiner
3. David J Magee Orthopedic physical assessment
4. S Brent brotzman. Kevin e wilk clinical orthopaedic rehabilitation
5. Kessler, management of common musculoskeletal disorders.
6. Positional Release technique- Leon Chaitou
7. Neurodynamics mobilization technique- Buttler.
8. Muscle Energy techniques- Leon Chaitou
9. Postural Correction technique- McKenzie
10. Physical Therapy of the Cervical and Thoracic Spine by Grant
11. Grieve's Modern Manual Therapy
12. Science and Practice of Mannual therapy by Eyal Lyderma
13. Motor control by ShummwayCook.

SUBJECT NAME: BIOMECHANICS & KINESIOLOGY LAB

SUBJECT CODE: PT 306

(w.e.f. July 2015)

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Practical shall be conducted for various joint movement and analysis of the same. Demonstration may also be given as how to analyse the movements of various joints including spine.

The students should be able to explain and demonstrate the movements occurring at the joints, the muscles involved, the movements or muscle action produced, and mention the axis and plane through which the movements occurs. The demonstration may be done on models or skeletons on followings:

1. Shoulder complex (Glenohumeral, Sternoclavicular, Acromioclavicular, and Scapulothoracic). **4hours**
2. Elbow and forearm (Superior Radio ulnar, Radiohumeral & Ulna humeral). **2hours**
3. Wrist complex (Radio carpal & Intercarpal) **2hours**
4. Hand complex (Carpometacarpal, Metacarpophalange) **4hours**
5. Hip & Pelvis complex (Sacroiliac joint) **6hours**
6. Knee Complex (Tibiofemoral & Patellofemoral) **2hours**
7. Ankle & Foot Complex (Subtalar, Tarsometatarsal, Metatarsophalangeal) **4hours**
8. Cervical, Thorax, Lumbar & Sacral **8hours**

RECOMMENDED BOOKS:

1. Joint Structure and Function – A comprehensive Analysis, By Cynthia Norkins.
2. Clinical Kinesiology for Physical Therapist Assistants, JP Bros Medical Publishers, Bangalore, 1st Indian Ed 1997
3. Basic Biomechanics Explained - Low & Reed - Butterworth Heinmann.
4. Kinesiology: Applied to Pathological Motion - Soderberg Lippincott
5. Therapeutic Exercise by Carolyn Kisner, F. A. Davis.
6. Basic Biomechanics. Nordin.
7. Basic Biomechanics & clinical Kinesiology. Otis
8. Biomechanics of Human Movement. D Winter

SUBJECT NAME: SEMINARS ON CLINICAL ISSUES

SUBJECT CODE: PT 307

(w.e.f. July 2015)

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These will serve as a platform for students to integrate various components of patient management and debate contentious issues in the efficacy of Physiotherapy techniques used in musculoskeletal, neurological, cardiopulmonary, & Sports rehabilitation. Students will present on topics provided to them.

CHECK LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the students:

Date:

Topic:

Marks: 50

S.No.	Item for observation during presentation	Poor (0)	Below Average (1)	Average (2)	Good (3)	Very Good (4)	Excellent (5)
1.	Introduction						
2.	Review of Literature						
3.	Recent Development						
4.	Clarity of presentation						
5.	Understanding of subject						
6.	Ability to answer the questions						
7.	Time management						
8.	Appropriate use of audio/ visual aids						
9.	Overall performance						
10.	Any other observations						
	TOTAL						

Comments:

Name & sSignature of the faculty/observer:

HoD,
Department of Physiotherapy

SUBJECT NAME: CLINICAL TRAINING
SUBJECT CODE: PT 308
(w.e.f. July 2015)

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Students will engage in clinical practice in Physiotherapy departments in the musculoskeletal, neurology, cardiopulmonary, sports settings to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.

MODEL CHECKLIST FOR EVALUATION OF CLINICAL TRAINING

Name of Student:

Name of Faculty/ Supervisor:

Marks: 50

Month:

Date:

S. No.	Point to be Considered	Poor (0)	Below Average (1)	Average (2)	Good (3)	Very Good (4)	Excellent (5)
1.	Punctuality						
2.	Interaction with colleagues and supporting staff						
3.	Maintenance of case records						
4.	Presentation of case during rounds						
5.	Investigation work up						
6.	Bedside Manners						
7.	Rapport with patients						
8.	Treatment approach & technique						
9.	Discipline						
10.	Overall quality of clinical work						
	TOTAL SCORE						

Comments:

Signature of Faculty/ Supervisor

HoD,
Department of Physiotherapy