



**INTEGRAL UNIVERSITY,  
LUCKNOW**

**INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES & RESEARCH**

**DEPARTMENT OF PHYSIOTHERAPY**

**BACHELOR OF PHYSIOTHERAPY  
(BPT)  
SYLLABUS**

**YEAR/ SEMESTER: II/III**







## Integral University, Lucknow

Effective from Session: 2016-17

<b>Course Code</b>	PT203	<b>Title of the Course</b>	EXERCISE THERAPY	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	II	<b>Semester</b>	III	3	1	0	4
<b>Pre-Requisite</b>	NIL	<b>Co-requisite</b>	NIL				
<b>Course Objectives</b>	To describe & and also acquire the skill of use of various tools of the Goniometry and measure range of motion. Acquire the skill of application of various manual muscle testing procedures & and describe the Physiological effects, therapeutic use, merits / demerits of the same and also know about various tools used in strengthening exercise. To acquire a skill of assessment of Gait, Posture and uses of Ambulatory devices and their measurement on models. Recall the basic principles of Physics related to mechanics of movement / motion & and to understand the application of such principles to the simple equipment designs & and; their efficacy in therapeutic gymnasium.						

### Course Outcomes

<b>CO1</b>	Student able to understand fundamental starting position and derived position and also able to utilize these specific positions for specific exercises.
<b>CO2</b>	Demonstrate the effective exercise therapeutic skills Goniometry measurement with strong theoretical knowledge on patients
<b>CO3</b>	Student able to evaluate functional muscular strength and design the various strengthening protocols.
<b>CO4</b>	Students must know about the different types of Equipments used in Gymnasium, and their setup of equipments and also their utilization, also able to use suspension therapy unit for rehabilitation.
<b>CO5</b>	Student able to learn the posture and various types of gait in order to enhance normal walking pattern which is used in ADL.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	FUNDAMENTAL STARTING POSITION & DERIVED POSITION	1. Brief description of fundamental starting position & derived position including joint positions, muscle work, stability, effects & uses in physiotherapy. 2. <b>Movements:</b> Definition of Movements, Brief description & Classification of movements. Techniques of application, indication, contraindication, effects & uses of the following- Active movements, Active assisted movement, Passive movement & Resisted movement.	8	CO1
2	RANGE OF MOTION & GONIOMETRY	1. <b>Range of Motion:</b> Definition of Range of Motion, normal range of motion, normal & abnormal End feels of the Joints. 2. <b>Goniometry:</b> Definition of Goniometry and its types. Principles, technique and application of goniometry. Testing position, procedure and measurement of ROM of the joints of upper limbs, lower limbs and trunk.	8	CO2
3	MANUAL MUSCLE TESTING (MMT): STRENGTHENING EXERCISE:	1. <b>Manual Muscle Testing (MMT):</b> Definition, Principle, Grading and applications techniques. Indication, Contraindication, Precaution, Testing position, procedure and grading of muscles of the upper limb, lower limb trunk, face and neck. 2. <b>Strengthening Exercise:</b> Definition of Strengthening Exercise. Principles, different mode of Strengthening Exercise, Indication, Contraindication, Precaution, techniques of application of Strengthening Exercises.	8	CO3
4	THERAPEUTIC GYMNASIUM: SUSPENSION THERAPY	1. <b>Therapeutic Gymnasium:</b> Set-up of gymnasium & its importance, various equipment in the gymnasium. Operational skills, effects, & uses of each equipment. 2. <b>Suspension Therapy:</b> Definition, types, principles, technique of application, indication, contraindication, precaution, effects & uses of suspension therapy.	8	CO4
5	POSTURE, GAIT & AMBULATORY TRAINING	1. <b>Posture overview:</b> Mechanism of the normal posture. Abnormal posture: assessment, types, aetogenesis management including therapeutic exercises. 2. <b>Gait:</b> Definition of Gait, Gait cycle. Time-distance Parameters of Gait, determinants of gait, Gait deviations. 3. <b>Ambulatory Training:</b> Walking aids and its types, indications, contraindication, effects & uses in various training techniques.	8	CO5

#### Reference Books:

1. Kisner and Colby. F.A. Davis, Therapeutic Exercises Foundations and Techniques
2. Gardiner, Principle of Exercise Therapy, C. B. S. Delhi.
3. Norkins & White F.A. Davis, Measurement of Joint Motion: A Guide to Goniometry.
4. Wood - W.B. Saunders, Beard's Massage.

#### e-Learning Source:

1. <https://youtu.be/VliXCmpQ2M>
2. [https://youtu.be/Z5\\_McW21qsc](https://youtu.be/Z5_McW21qsc)
3. <https://youtu.be/S5Tf1BldM>
4. <https://youtu.be/J6sIIDZOSQo>

### Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO-PSO CO	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	2	1	2	1	1	1	1	-	-	2	2	2	1	-	1
CO2	2	2	3	2	3	1	1	1	-	2	1	1	2	2	2	3	2
CO3	2	3	3	2	3	2	1	2	-	2	-	1	3	3	1	3	1
CO4	2	2	2	1	2	1	1	1	2	-	-	2	3	2	2	2	1
CO5	1	3	3	3	3	1	2	1	1	2	-	2	3	3	3	3	2

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

#### Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
		Employ ability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
PT 203	EXERCISE THERAPY	√	√	√	√		√	√	3,4



**Integral University, Lucknow**

**Effective from Session: 2016-17**

<b>Course Code</b>	<b>PT204</b>	<b>Title of the Course</b>	<b>ELECTROTHERAPY</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	<b>II</b>	<b>Semester</b>	<b>III</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>
<b>Pre-Requisite</b>	Nil	<b>Co-requisite</b>	Nil				
<b>Course Objectives</b>	At the end of the course, the candidate will be able to Describe the Production & Physiological effects, Therapeutic uses, merits, demerits indication & contraindications of various low, medium & high frequency modes of currents. Acquire the skill of Application of the Electro therapy modes on models, for the purpose of Assessment & Treatment. Acquire an ability to select the appropriate mode as per the tissue specific & area specific application						

**Course Outcomes**

<b>CO1</b>	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions
<b>CO2</b>	List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
<b>CO3</b>	Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients.
<b>CO4</b>	Aware of the construction, Biophysical principles and effects, dangers, safety measures, judicial use, appropriate methods of application , contraindications of the various High frequency equipments.
<b>CO5</b>	Electro Physical Agents –I: Practice towards Scientific excellence.

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Content of Unit</b>	<b>Contact Hrs.</b>	<b>Mapped CO</b>
1	BASIC OF CURRENTS & LOW FREQUENCY CURRENTS:	<ol style="list-style-type: none"> <li><b>1. Basic of Currents:</b> Introduction to History of currents, Production, Physiological effects on Nerve and Muscle tissue and therapeutic effects to AC, DC and Modified Currents.</li> <li><b>2. Transcutaneous Electric Nerve Stimulation (TENS):</b> History of Transcutaneous Electric Nerve Stimulation (TENS). Types of low frequency, pulse widths, frequencies &amp; intensities used as TENS applications. Principle of clinical application effects &amp; uses indications, contraindications, precautions, and operational skills of equipment &amp; patient preparation. Theories of pain relief by TENS.</li> <li><b>3. Muscle Stimulators (MS):</b> Muscle Stimulators (MS) Types of frequency, pulse widths, frequencies &amp; intensities used as MS applications. Principle of clinical application effects &amp; uses indications, contraindications, precautions, and operational skills of equipment &amp; patient preparation.</li> <li><b>4. Iontophoresis:</b> Definition, Physiological &amp; Therapeutics effects, Principle of application, Methods of Application, indications, contraindications, precautions.</li> </ol>	8	CO1
2	MEDIUM FREQUENCY CURRENTS:	<ol style="list-style-type: none"> <li><b>1. Interferential Therapy (IFT):</b> History of Interferential therapy (IFT), Types of medium frequency, pulse widths, frequencies &amp; intensities used as IFT applications. Principle of clinical application, effects, uses, indications, contraindications, precautions, and operational skills of equipment &amp; patient preparation. Theories of pain relief by IFT.</li> <li><b>2. Russian Currents (RC):</b> Russian Currents (RC), Types of frequency, pulse widths, frequencies &amp; intensities used as RC applications. Principle of clinical application effects, uses, indications, contraindications, precautions, and operational skills of equipment &amp; patient preparation.</li> </ol>	8	CO2
3	HIGH FREQUENCY CURRENTS-I:	<ol style="list-style-type: none"> <li><b>1. Ultrasound Therapy Unit (UST):</b> Ultrasound therapy Unit (UST), Production, Physiological &amp; Therapeutics effects, Principle of application of Ultrasound therapy, Methods of Application of UST, phonophoresis, effects, indications, contraindications, precautions, and patient preparation.</li> <li><b>2. Long Wave Diathermy (LWD):</b> Long Wave Diathermy (LWD), Production, Physiological &amp; Therapeutics effects, Principle of application of Long Wave Diathermy, Methods of Application of LWD, effects, indications, contraindications, precautions, and patient preparation.</li> <li><b>3. Extracorporeal Shock Wave Therapy (ECSWT):</b> ` Brief overview.</li> </ol>	8	CO3
4	HIGH FREQUENCY CURRENTS-II:	<ol style="list-style-type: none"> <li><b>1. Shortwave Diathermy (SWD):</b> Shortwave Diathermy (SWD), Production, Physiological &amp; Therapeutics effects, Principle of application of Shortwave Diathermy, Methods of Application of SWD, types of electrodes, effects, indications, contraindications, precautions, dangers and patient preparation</li> <li><b>2. Micro Wave Diathermy (MWD):</b> Micro Wave Diathermy (MWD), Production, Physiological &amp; Therapeutics effects, Principle of application of Microwave Diathermy, Methods of Application of MWD, effects, indications, contraindications, precautions, dangers and patient preparation.</li> </ol>	8	CO4
5	ELECTRO PHYSICAL AGENTS	<ol style="list-style-type: none"> <li><b>1. Cryotherapy:</b> Cryotherapy (CT), Principle of Cryotherapy, Physiological effects, Methods of Application of Cryotherapy. Principle of clinical application, effects, uses, indications, contraindications, precautions, and patient preparation. Theories of pain relief by Cryotherapy.</li> <li><b>2. Paraffin Wax Bath:</b> Paraffin wax bath, Principle of application of Paraffin wax bath, Physiological effects, Methods of Application of PWB, effects, uses, indications, contraindications, precautions, and patient preparation.</li> <li><b>3. Hydro-collator Bath:</b> Hydro-collator Bath, Principle of application of Hydrocollator Bath, Physiological effects, Methods of Application of Hydro-collator Bath, effects, uses, indications, contraindications, precautions, and patient preparation.</li> <li><b>4. Electrical Heating Pads:</b> Electrical heating pads, Principle of application of Electrical heating pads, Physiological effects, Methods of Application of Electrical heating pads, effects, uses, indications, contraindications, precautions, and patient preparation.</li> </ol>	8	CO5

**Reference Books:**

1. Clayton's Electrotherapy (theory and practice) – Clayton's AIBS publications.
2. Electrotherapy Explained by John Low and Reed, 3rd edition, B & H Publications.
3. Practical in Electrotherapy by Joseph Kahn, Churchill livingstone.
4. Electrotherapy: Evidence Based Practice by Kitchen Sheild, 11th ed.
5. Physical Agents in Rehabilitation: From Research to Practice by Cameron.

**e-Learning Source:**

1. <https://youtu.be/PqbRvPLg-nsffghgg>
2. [https://youtu.be/P11P0BVTU\\_s](https://youtu.be/P11P0BVTU_s)
3. <https://youtu.be/TDCKqKMSrUw>
4. <https://youtu.be/iPXVdTCMktM>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	-	1	-	1	-	2	-	2	3	2	2	2	1
CO2	1	3	-	3	-	1	-	1	-	3	-	3	2	1	1	3	2
CO3	2	3	1	2	-	1	-	1	-	2	-	3	3	2	1	3	1
CO4	1	3	-	3	-	-	-	1	-	3	-	2	2	2	2	3	2
CO5	2	3	-	2	-	1	-	1	-	2	-	3	2	1	1	2	1

1. Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation  
Attributes & SDGs

Course Code	Course Title	Attributes						SDGs No.	
PT204	ELECTROTHERAPY	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4,9
		√	√	√	√		√	√	





**Integral University, Lucknow**

<b>Effective from Session:</b> 2016-17							
<b>Course Code</b>	<b>PT205</b>	<b>Title of the Course</b>	<b>SURFACE ANATOMY AND PALPATION SKILLS</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	<b>II</b>	<b>Semester</b>	<b>III</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>
<b>Pre-Requisite</b>	Nil	<b>Co-requisite</b>	Nil				
<b>Course Objectives</b>	About the reviews the surface anatomy and provide an organized approaches for locating osseous and soft tissue landmark relating to major extremity joints, (foot/ ankle, knee, hip, shoulder girdle, elbow and wrist/hand) and all regions of the spine (cervical, thoracic, lumbar, pelvic). Be able to palpate the landmarks, and prominent area of the body for examination.						

<b>Course Outcomes</b>	
<b>CO1</b>	To give the overview about the palpatory process.
<b>CO2</b>	To make the students familiar to the different term related to the surface anatomy.
<b>CO3</b>	To make the students familiar to the different term related to the surface anatomy.
<b>CO4</b>	To make understand to the students about different anatomical landmark Shoulder girdle, Elbow and wrist.
<b>CO5</b>	To make understand to the students about different anatomical landmark of Hip, Knee, Ankle and Foot.

<b>Unit No.</b>	<b>Title of the Unit</b>	<b>Content of Unit</b>	<b>Contact Hrs.</b>	<b>Mapped CO</b>
1	INTRODUCTION OF SURFACE ANATOMY & PALPATION SKILLS	Terminology related to surface anatomy, and palpation skill. Principle of surface marking and palpation. Types of palpation and its uses in assessment. Ethical and legal issues regarding palpation techniques.	8	CO1
2	LANDMARK LOCATION AND PALPATION SKILL OF SPINE	Landmark location and palpation skill of Lumbo-pelvic region. Landmark location and palpation skill of Thoracic Spine. Landmark location and palpation skill of Cervical and Occipital region.	8	CO2
3	LANDMARK LOCATION AND PALPATION SKILL OF U/E	Landmark location and palpation skill of Shoulder Girdle. Landmark location and palpation skill of Elbow. Landmark location and palpation skill of Wrist & Hand	8	CO3
4	LANDMARK LOCATION AND PALPATION SKILL OF L/E	Landmark location and palpation skill of Foot & Ankle. Landmark location and palpation skill of Knee. Landmark location and palpation skill of Hip.	8	CO4
5	BASIC POSTURAL OBSERVATIONAL SKILL	Normal body alignment, symmetry and plumb line. Observation of static and dynamic posture in various positions (sitting, standing & walking) and gait.	8	CO5

<b>Reference Books:</b>	
1.	A Manual Therapist Guide to Surface anatomy and Palpation Skills by David Bayfield & Stuart Kinsinger.
2.	Orthopaedics Physical Assessment. By D Magee.
3.	An Introduction of fundamental Anatomy by David Sinclair.
4.	Human Anatomy by B.D. Chaurasiya- All 3volumes
<b>e-Learning Source:</b>	
1.	<a href="https://youtu.be/ZyL.Crf44i48">https://youtu.be/ZyL.Crf44i48</a>
2.	<a href="https://youtu.be/L6v1yE2N8hI">https://youtu.be/L6v1yE2N8hI</a>
3.	<a href="https://youtu.be/dCzuLb3Cng8">https://youtu.be/dCzuLb3Cng8</a>
4.	<a href="https://youtu.be/Jey2R9urbOM">https://youtu.be/Jey2R9urbOM</a>

<b>Course Articulation Matrix: (Mapping of COs with POs and PSOs)</b>																
<b>PO-PSO CO</b>	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
<b>CO1</b>	1	3	2	3	2	1	-	1	-	2	-	2	1	2	2	-
<b>CO2</b>	2	3	3	3	3	1	-	1	-	3	-	3	3	3	1	2
<b>CO3</b>	3	2	3	3	2	2	-	2	-	2	-	2	3	3	2	3
<b>CO4</b>	2	3	3	3	3	1	-	1	-	3	-	2	3	3	2	2
<b>CO5</b>	2	3	3	3	3	1	-	1	-	2	-	3	2	3	2	-

**1. Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation**  
**Attributes & SDGs**

<b>Course Code</b>	<b>Course Title</b>	<b>Attributes</b>							<b>SDGs No.</b>
<b>PT205</b>	<b>SURFACE ANATOMY AND PALPATION SKILLS</b>	Empl yability	Entrepre neurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	<b>3,4</b>
		√	√	√	√		√	√	



**Integral University, Lucknow**

Effective from Session: 2016-17

<b>Course Code</b>	<b>PT206</b>	<b>Title of the Course</b>	<b>PSYCHOLOGY &amp; EXPERIMENTAL PSYCHOLOGY</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	<b>II</b>	<b>Semester</b>	<b>III</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>
<b>Pre-Requisite</b>	Nil	<b>Co-requisite</b>	Nil				
<b>Course Objectives</b>	Be able to 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. Be able to understand the importance of psychological status of the person in health & disease; environmental & emotional influence on the mind & personality. Describe in brief the various treatment modalities commonly used.						

Course Outcomes	
<b>CO1</b>	Student able to understand psychology and its branches of along with higher psychological abilities.
<b>CO2</b>	Student able to understand a process of learning and memory.
<b>CO3</b>	Student able to learn the behaviour aspect which influences the persons personalities for executing various tasks
<b>CO4</b>	Student able to understand life span development as how its effects human behaviour.
<b>CO5</b>	Student able to understand the various theories of coping mechanism like clients centered approach.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	INTRODUCTION TO PSYCHOLOGY	Definition, application and methods in psychology, Biology of Behavior, Sensory processes and perception, Principles of learning, Classical and Instrumental Conditioning, Cognitive learning, Memory, long and short – term memories, forgetting, amnesia.	8	CO1
2	THINKING AND LANGUAGE	Thinking and Language, Concepts, thinking process, problem- solving and decision making, creative thinking and language communication, Motivation, Biological and Social motives, frustration and conflict of motives, motives to know and be effective, Emotion and Stress, Expression and perception of emotions, physiology and application of emotion.	8	CO2
3	SOCIAL PERCEPTIONS	Social perceptions, influences, and relationships, Attitudes, Nature and measurement of attitudes, Factors in attitude change, Behavior and attitudes.	8	CO3
4	DEVELOPMENT	Development- A Lifespan Perspective (infancy, childhood, adolescence, adult, old age), Personality, Defining and thinking about personality, Theories and issues and controversies and research	8	CO4
5	ABNORMAL PSYCHOLOGY	Abnormal Psychology, Therapy for Psychological distress, Brief description of Psychological assessment and testing.	8	CO5

**Reference Books:**

1. Morgan C.T., King R. A., Weijz J. R. Schopler J.
2. Introduction to Psychology, 7 th edn. (Tata McGraw-Hill Publishing Co. Ltd.)
3. Human Development, 5th. (Tata McGraw Hill Publishing Co. Ltd)
4. Munn N.L. Introduction to Psychology-(Premium Oxford, I.B.P. Publishing Co.)

**e-Learning Source:**

1. <https://youtu.be/P3FKHH2RzjI?list=PL6A08EB4EEFF3E91F>
2. <https://youtu.be/YvAn9YZLl5w>
3. [https://youtu.be/7h9LnLFck\\_Q](https://youtu.be/7h9LnLFck_Q)

PO-PSO CO	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
<b>CO1</b>	3	-	-	1	-	1	-	3	2	-	-	2	-	-	2	-	2
<b>CO2</b>	2	-	-	3	-	2	1	1	3	-	1	3	-	-	3	-	3
<b>CO3</b>	3	-	-	-	-	1	1	2	2	-	2	2	-	-	3	-	2
<b>CO4</b>	3	-	-	-	-	1	-	1	1	-	1	3	-	-	2	-	1
<b>CO5</b>	2	-	-	-	-	1	-	3	2	-	-	2	-	-	2	-	1

**1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation**

**Attributes & SDGs**

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
<b>PT206</b>	<b>PSYCHOLOGY &amp; EXPERIMENTAL PSYCHOLOGY</b>	√		√	√		√	√	<b>3,4</b>







## Integral University, Lucknow

**Effective from Session:** 2016-17

<b>Course Code</b>	<b>PT208</b>	<b>Title of the Course</b>	<b>ELECTROTHERAPY-LAB</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	<b>II</b>	<b>Semester</b>	<b>III</b>	0	0	4	2
<b>Pre-Requisite</b>	Nil	<b>Co-requisite</b>	Nil				
<b>Course Objectives</b>	Acquire the skill of Application of the Electro therapy modes on models, for the purpose of Assessment & Treatment. Acquire an ability to select the appropriate mode as per the tissue specific & area specific application.						

### Course Outcomes

<b>CO1</b>	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions
<b>CO2</b>	List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
<b>CO3</b>	Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients
<b>CO4</b>	Aware of the construction, Biophysical principles and effects, dangers, safety measures, judicial use, appropriate methods of application, contraindications of the various radiation equipments.
<b>CO5</b>	Know the principles, technique and effects of electrotherapy as a superficial therapeutic modality.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	BASIC OF CURRENTS & LOW FREQUENCY CURRENTS	<ul style="list-style-type: none"> <li>Sensory and motor stimulation of nerves and muscles by various types of low frequency currents on self.</li> <li>Locate and stimulate different motor points region wise, including the upper and lower limb, trunk &amp; face.</li> <li>Therapeutic application different low frequency currents faradic foot bath, faradism under pressure,</li> <li>Iontophoresis</li> </ul>	8	CO1
2	MEDIUM FREQUENCY CURRENTS	<ul style="list-style-type: none"> <li>TENS Stimulator, its operation and application - region wise.</li> <li>IFT-Its operation and application –region wise.</li> </ul>	8	CO2
3	HIGH FREQUENCY CURRENTS-I	<ul style="list-style-type: none"> <li>Short wave diathermy unit, its operation and different methods of application - region wise.</li> <li>Microwave diathermy unit, its operation and different methods of application - region wise.</li> </ul>	8	CO3
4	HIGH FREQUENCY CURRENTS-II	<ul style="list-style-type: none"> <li>Long wave therapy unit, its operation and different method of application- region wise.</li> <li>Ultrasound unit, its operation and methods of application - region wise.</li> </ul>	8	CO4
5	ELECTRICAL REACTIONS ELECTRO-DIAGNOSTICTESTS	<ul style="list-style-type: none"> <li>Hydrocollatar bath unit, its operation and different method of application- region wise.</li> <li>Paraffin wax bath unit, its operation and different method of application- region wise.</li> <li>Various forms of therapeutic cold application region wise including ice, cold packs, vapocoolant sprays, etc.</li> </ul>	8	CO5

#### Reference Books:

1. Clayton's Electrotherapy
2. Clinical Electrotherapy- Nelson and Currier
3. Electrotherapy Explained- Low and Reed
4. Electrotherapy in Rehabilitation-Meryl Roth Gerth
5. Electrotherapy Explained-Sheela Kitchen
6. Basic of Electrotherapy by Basant Kumar Nanda

#### e-Learning Source:

1. [https://youtu.be/FUEow\\_aFy-4](https://youtu.be/FUEow_aFy-4)
2. <https://youtu.be/Jzcu5YCjgN4>
3. <https://youtu.be/G2Mo46eLAFs>
4. <https://youtu.be/DeEnKiB6JvM>

### Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO-PSO CO	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO3	PSO4	PSO5
<b>CO1</b>	3	3	1	2	-	1	-	1	-	2	-	2	3	2	2	2	1	3
<b>CO2</b>	2	3	-	3	-	2	-	1	-	2	-	3	2	1	1	3	2	2
<b>CO3</b>	2	3	1	2	-	1	-	1	-	2	-	3	3	2	1	3	1	2
<b>CO4</b>	1	3	-	2	-	-	-	1	-	3	-	3	2	1	2	3	2	1
<b>CO5</b>	1	3	-	2	-	1	-	1	-	2	-	3	2	1	1	2	1	1

**1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation**

#### Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
PT208	ELECTROTHERAPY-LAB	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4,9
		√	√	√	√		√	√	



**Integral University, Lucknow**

<b>Effective from Session: 2016-17</b>							
<b>Course Code</b>	<b>PT 209</b>	<b>Title of the Course</b>	<b>SURFACE ANATOMY &amp; PALPATION SKILLS LAB</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	<b>II</b>	<b>Semester</b>	<b>III</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>
<b>Pre-Requisite</b>	Nil	<b>Co-requisite</b>	Nil				
<b>Course Objectives</b>	This course involves a detailed study of Surface anatomy of Human body, Palpation Skill, indications, and contra-indications, precautions for palpation during the assessment in Physiotherapy						

<b>Course Outcomes</b>	
<b>CO1</b>	Introduction of Surface Anatomy & Palpation Skills: To give the overview about the palpatory process.
<b>CO2</b>	Landmark Location and Palpation Skill of Spine: To make the students familiar to the different term related to the surface anatomy.
<b>CO3</b>	Landmark Location and Palpation Skill of U/E: To make the students familiar to the different term related to the surface anatomy.
<b>CO4</b>	Landmark Location and Palpation Skill of L/E: To make understand to the students about different anatomical landmark Shoulder girdle, Elbow and wrist.
<b>CO5</b>	Basic Postural Observational Skill: To make understand to the students about different anatomical landmark of Hip, Knee, Ankle and Foot.

<b>Exper iment No.</b>	<b>Title of the Experiment</b>	<b>Content of Unit</b>	<b>Contact Hrs.</b>	<b>Mapped CO</b>
1	Introduction of Surface Anatomy & Palpation Skills	To give the overview about the palpatory process used in the decision making for patient assessment in diagnostic as well as prognostic	4	CO1
2	Landmark Location and Palpation Skill of Spine	To understand about anatomical term related to the surface anatomy used as a diagnostic land mark to evaluate the patient problem associated with the different sign and symptoms.	4	CO2
3	Landmark Location and Palpation Skill of U/E	To understand surface anatomy used as a diagnostic land mark to evaluate the patient problem mostly related with musculoskeletal pain and client centered problem.	4	CO3
4	Landmark Location and Palpation Skill of L/E	To understand about term related with lower extremity used as a diagnostic land mark to evaluate root cause of the patient problem.	4	CO4
5	Basic Postural Observational Skill	To make understand to the students about different anatomical landmark of Hip, Knee, Ankle and Foot	4	CO5

<b>Reference Books:</b>
1. A Manual Therapist Guide to Surface anatomy and Palpation Skills by David Byfield & Stuart Kinsinger. 2
2. Orthopaedics Physical Assessment. By D Magee. 3. An Introduction of fundamental Anatomy by David Sinclair.
3. An Introduction of fundamental Anatomy by David Sinclair.
4. Anatomy of Chaurasiya- All 3 volumes.

<b>e-Learning Source:</b>
1. <a href="https://youtu.be/dCzuLb3Cng8">https://youtu.be/dCzuLb3Cng8</a>
2. <a href="https://youtu.be/Jey2R9urbOM">https://youtu.be/Jey2R9urbOM</a>
3. <a href="https://youtu.be/7iA6dkaXYoo">https://youtu.be/7iA6dkaXYoo</a>
4. <a href="https://youtu.be/-b MAq6Rkww">https://youtu.be/-b MAq6Rkww</a>
5. <a href="https://youtu.be/XrOP3AeDjiM">https://youtu.be/XrOP3AeDjiM</a>

<b>Course Articulation Matrix: (Mapping of COs with POs and PSOs)</b>																	
<b>PO-PSO CO</b>	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
<b>CO1</b>	1	1	2	3	2	1	-	1	-	2	-	2	1	2	2	-	3
<b>CO2</b>	2	3	3	3	3	1	-	1	-	3	-	3	3	3	1	2	2
<b>CO3</b>	3	2	3	2	2	2	-	2	-	2	-	2	3	3	2	3	1
<b>CO4</b>	2	3	3	3	3	1	-	1	-	3	-	2	3	3	2	2	1
<b>CO5</b>	2	3	3	3	3	1	-	1	-	2	-	3	2	3	2	-	2

**1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation**

<b>Attributes &amp; SDGs</b>		<b>Attributes</b>							<b>SDGs No.</b>
<b>Course Code</b>	<b>Course Title</b>	Employ ability	Entrepren eurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
<b>PT209</b>	<b>SURFACE ANATOMY &amp; PALPATION SKILLS LAB</b>	√	√	√	√		√	√	<b>3,4</b>



# **INTEGRAL UNIVERSITY, LUCKNOW**

**INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES & RESEARCH**

**DEPARTMENT OF PHYSIOTHERAPY**

**BACHELOR OF PHYSIOTHERAPY**

**(BPT)**

**SYLLABUS**

**YEAR/ SEMESTER: II/IV**





## Integral University, Lucknow

<b>Effective from Session: 2016-17</b>							
<b>Course Code</b>	<b>PT211</b>	<b>Title of the Course</b>	<b>PHARMACOLOGY</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	<b>II</b>	<b>Semester</b>	<b>IV</b>	2	1	0	3
<b>Pre-Requisite</b>	Nil	<b>Co-requisite</b>	Nil				
<b>Course Objectives</b>	Acquire knowledge of various drugs used for each medical condition to understand its effects and its use during therapy						

Course Outcomes	
<b>CO1</b>	General Pharmacology & ANS: Possess a relevant knowledge in basic principles of pharmacology and its recent advances.
<b>CO2</b>	Autacoids, PNS & Resp. System: Understand the basic pharmacology of common drugs used, their importance in the overall treatment including Physiotherapy.
<b>CO3</b>	CVS, GIT & Miscellaneous: Understand the general principles of drug action and the handling of drugs by the body.
<b>CO4</b>	CNS & Hormones: Understand the contribution of both drug and physiotherapy factors in the outcome of treatment
<b>CO5</b>	Anti - Microbial Agents: Learn the various drugs such as Anti-leprotic& Anti-fungal Drugs, Anti-malarial Drugs, Anti-tubercular Drugs

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	<b>GENERAL PHARMACOLOGY &amp; ANS</b>	Routes of Drug Administration, Pharmacokinetics, Pharmacodynamics, Adverse Drug Reactions, Cholinergics & Anti-cholinergics, Adrenergics & Anti-adrenergics	6	CO1
2	<b>AUTACOIDS, PNS &amp; RESP.SYSTEM</b>	Autacoids & Antihistaminics, Drug Therapy of Migraine, NSAIDs, Anti- Gout & Anti-Rheumatoid, SkeletalMuscle Relaxants, Local Anaesthetics, Drug acting on RespiratorySystem	6	CO2
3	<b>CVS, GIT&amp;MISCELLANEOUS</b>	Anti-anginal Drugs, Anti-hypertensive Drugs, Drugs for Peptic Ulcer, Anti-emetic Drugs, Drugs acting on Kidney, Drugs affecting bleeding &coagulants, Chelating Agents, Anti septic &Disinfectants	6	CO3
4	<b>CNS&amp; HORMONES</b>	General Anaesthesia, Sedatives & Hypnotics, Alcohols, Opioid Analgesics, Insulin & Oral Hypoglycemic Drugs, Corticosteroids, Estrogen, Progestins & OCPs, Calcium Balance	6	CO4
5	<b>ANTI - MICROBIAL AGENTS</b>	Sulphonamides, Quinolones, Beta-lactams, Aminoglycosides, Anti-tubercular Drugs, Anti-leprotic& Anti-fungal Drugs, Anti-malarial Drugs, Anti-amoebic & Anti-helminthic Drugs	6	CO5

<b>Reference Books:</b>	
1. Dr. K.D. Tripathi Jaypee, Essential of Medical Pharmacology, Brothers Medical Publishers.	
2. Gaddum Gaddum's Pharmacology	
3. Dr. R.S. Satoskar & Dr. S.D. Bhandarkar, Pharmacology & Pharmacotherapeutics Revised 19 <sup>th</sup> Edition 2005 by Popular Prakashan	
4. Krantx, & Carr, Pharmacology principle of Medical practice, Williams & Wilkins.	
5. Goodman Pharmacological basis of Therapeutics, L. S. Gilman A	
<b>e-Learning Source:</b>	
1. <a href="https://youtu.be/a0lWfQvQKw8">https://youtu.be/a0lWfQvQKw8</a>	
2. <a href="https://youtu.be/qhiMmNZjHRg">https://youtu.be/qhiMmNZjHRg</a>	
3. <a href="https://youtu.be/-znHCAu5OnY">https://youtu.be/-znHCAu5OnY</a>	
4. <a href="https://youtu.be/t2tKyvj7u5Y">https://youtu.be/t2tKyvj7u5Y</a>	

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
<b>CO1</b>	2	3	-	-	-	-	-	-	-	-	-	1	3	-	1	-
<b>CO2</b>	3	3	-	-	-	2	-	-	-	-	-	-	3	3	2	3
<b>CO3</b>	2	3	-	-	-	2	-	-	-	-	-	1	3	2	1	3
<b>CO4</b>	3	3	-	-	-	-	-	-	-	-	-	-	2	3	2	2
<b>CO5</b>	3	3	-	-	-	3	-	1	-	-	-	-	3	3	2	3

**1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation**

Course Code	Course Title	Attributes						SDGs No.	
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value		Professional Ethics
PT211	<b>PHARMACOLOGY</b>	√		√	√		√	√	<b>3,4</b>

















## Integral University, Lucknow

<b>Effective from Session:</b>							
<b>Course Code</b>	<b>PT217</b>	<b>Title of the Course</b>	<b>ELECTROTHERAPY &amp; ELECTRODIAGNOSIS LAB</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Year</b>	<b>II</b>	<b>Semester</b>	<b>IV</b>	0	0	4	2
<b>Pre-Requisite</b>	Nil	<b>Co-requisite</b>	Nil				
<b>Course Objectives</b>	Know the principles, technique and effects of electrotherapy as a therapeutic modality in course involves a detailed study of application techniques, effects, indications, contra-indications, precautions, operational skills of equipment, patient preparation of physical agent modalities used in Physiotherapy						

Course Outcomes	
<b>CO1</b>	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions
<b>CO2</b>	List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
<b>CO3</b>	Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients
<b>CO4</b>	Aware of the construction, Biophysical principles and effects, dangers, safety measures, judicial use, appropriate methods of application, contraindications of the various radiation equipments.
<b>CO5</b>	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in condition like nerve injuries. Possess knowledge of all the commonly used electro diagnostic tests like Electromyography, nerve conduction study in relevant conditions.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	THERMALAGENTS-II	<ul style="list-style-type: none"> <li>Contrast bath therapy, its operation and methods of application - region wise.</li> <li>Paraffin bath therapy, its operation and methods of application - region wise.</li> <li>Fluidotherapy therapy, its operation and methods of application - region wise.</li> </ul>	8	CO1
2	ACTINOTHERAPY	<ul style="list-style-type: none"> <li>Different types of Ultra violet units, their operation, and assessment of test dose and application of UVR - region wise.</li> </ul>	8	CO2
3	THERAPEUTIC LIGHT IN PHYSIOTHERAPY	<ul style="list-style-type: none"> <li>LASER unit, its operation and methods of application - region wise.</li> </ul>	8	CO3
4	INTERMITTENT COMPRESSION DEVICES (ICD)	<ul style="list-style-type: none"> <li>Application of ICD in upper limb and lower limb</li> </ul>	8	CO4
5	ELECTRICAL REACTIONS ELECTRO-DIAGNOSTICTESTS	<ul style="list-style-type: none"> <li>Reaction of degeneration of nerves.</li> <li>Plot strength duration curves.</li> <li>Application of EMG biofeedback in different cases.</li> </ul>	8	CO5

<b>Reference Books:</b>	
1.	Clayton's Electrotherapy
2.	Clinical Electrotherapy- Nelson and Currier
3.	Electrotherapy Explained- Low and Reed
4.	Electrotherapy in Rehabilitation-Meryl Roth Gerth
5.	Electrotherapy Explained-Sheela Kitchen
6.	Basic of Electrotherapy by Basant Kumar Nanda
<b>e-Learning Source:</b>	
1.	<a href="https://youtu.be/FUEow_aFy-4">https://youtu.be/FUEow_aFy-4</a>
2.	<a href="https://youtu.be/Jzcw5YCjgN4">https://youtu.be/Jzcw5YCjgN4</a>
3.	<a href="https://youtu.be/G2Mo46eLAFs">https://youtu.be/G2Mo46eLAFs</a>
4.	<a href="https://youtu.be/DeEnKiB6JvM">https://youtu.be/DeEnKiB6JvM</a>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
	CO1	1	2	-	3	-	2	-	1	-	2	-	2	3	-	1
CO2	1	3	-	1	-	-	-	1	-	3	-	3	3	1	3	2
CO3	2	3	-	2	-	-	-	-	-	3	-	2	2	3	2	3
CO4	1	2	-	3	-	-	-	1	-	2	-	2	2	1	2	1
CO5	1	2	3	3	-	-	-	-	-	3	-	3	3	3	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Course Code		Course Title		Attributes					SDGs No.
PT217	ELECTROTHERAPY & ELECTRODIAGNOSIS LAB	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4,9
		√	√	√	√		√	√	



