

Program Syllabus Booklet

Diploma in Physiotherapy (Code-707)



Session: 2021-22

GURU KASHI UNIVERSITY**University College of Physical Education (Code:7)****Diploma in Physiotherapy (Code-707)****Study Scheme****Semester: 1st**

Sr.	Subject Code	Subject Name	Type of Subject	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	A707101	Anatomy	T	5	0	0	5	50	50	100
2	A707102	Biology	T	5	0	0	5	50	50	100
3	A707103	Physiology	T	5	0	0	5	50	50	100
4	707104	English	T	4	0	0	4	50	50	100
5	707105	Anatomy Lab	P	0	0	2	1	50	50	100
6	A707106	Biology Lab	P	0	0	2	1	50	50	100
7	707107	Physiology Lab	P	0	0	2	1	50	50	100
Total No. of Credits				22						

Semester: 2nd

Sr.	Subject Code	Subject Name	Type of Subject	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	A707201	Bio Chemistry	T	5	0	0	5	50	50	100
2	A707202	Biomechanics	T	5	0	0	5	50	50	100
3	A707203	Kinesiology	T	5	0	0	5	50	50	100
4	A707204	Sociology	T	4	0	0	4	50	50	100
5	707205	Biomechanics Lab	P	0	0	4	2	50	50	100
6	707206	Kinesiology Lab	P	0	0	4	2	50	50	100
Total No. of Credits				23						

Semester: 3rd

Sr.	Subject Code	Subject Name	Type of Subject	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	A707301	Electrotherapy-I	T	5	0	0	5	50	50	100
2	A707302	Exercise Therapy-I	T	5	0	0	5	50	50	100
3	707303	First aid and its management	T	5	0	0	5	50	50	100
4	707304	Computer Applications	T	4	0	0	4	50	50	100
5	707305	Electrotherapy-I Lab	P	0	0	2	1	50	50	100
6	707306	Exercise Therapy-I Lab	P	0	0	2	1	50	50	100
7	707307	Computer Applications Lab	P	0	0	2	1	50	50	100
Total No. of Credits				22						

Study Scheme**Semester: 4th**

Sr.	Subject Code	Subject Name	Type of Subject	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	A707401	Electrotherapy-II	T	5	0	0	5	50	50	100
2	A707402	Exercise Therapy-II	T	5	0	0	5	50	50	100
3	707403	Pathology	T	5	0	0	5	50	50	100
4	707404	Psychology	T	4	0	0	4	50	50	100
5	707405	Electrotherapy-II Lab	P	0	0	4	2	50	50	100
6	707406	Exercise Therapy-II Lab	P	0	0	4	2	50	50	100
Total No. of Credits				23						



GURU KASHI UNIVERSITY, TALWANDI SABO
UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Anatomy (A707101)

Credits: 5
Semester – I

L T P
5 0 0

CO	Statement
CO1	To gain knowledge of structural organization of human body/parts.
CO2	To gain understand the importance of each bone, joint and muscle along with other structures from clinical point of view.
CO3	To gain skill to examine issues related to anatomy and physiology from an evidence based perspective.

Course content-

Unit I

1. **Introduction-** Define anatomy, subdivisions, anatomical positions (planes and axes) and anatomical terminology (Groove, tuberosity, trochanters etc).
2. **Skeleton system-**
 - Bones- Definition, classification, gross structure, parts of a young bone, blood and nerve supply of bones
 - Cartilage – Definition and classification.
 - Joints- Definition, classification
3. **Muscular system-** Definition, types, actions.

Unit II

4. **Digestive system-** Location, size, shape, features and functions of following organs –
 - Stomach
 - Liver
 - Spleen
 - Pancreas
 - Intestines
 - Gall bladder.
5. **Respiratory system-**
 - Outline of respiratory passage
 - Position and parts of lungs.
6. **Nervous system-** Structure and function of following parts –
 - CNS & PNS
 - Brainstem
 - Cerebellum
 - Cerebral hemispheres
 - Meninges
 - Cranial nerves.



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- Peripheral Nerves
7. **Cardio vascular system**- Structure and function of the following -
- Arteries
 - Capillaries
 - Veins
 - Lymphatic system
 - Heart.
8. **Excretory system** – Position, shape, size and features of the following -
- Kidney
 - Urinary bladder.

Unit III

9. **Osteology** –Nomenclature, shape and location of all human bones.
10. **Myology** – Nomenclature, location and action of major muscles of human body.

Recommended Books:

- i. Textbook of Anatomy with colour Atlas – Vol. 1, 2, 3. Inderbir Singh (Third edition), Jaypee Brothers.
- ii. Human Anatomy – Volume 1, 2, 3. B.D. Chaurasia (2017), CBS Publishers & Distributors.

Reference Books:

- i. Gray's Anatomy, L. Williams & Warwick (2015) – Churchill Livingstone.
- ii. Last's Anatomy – Regional and applied, R.M.H. McMinn's (2011), Churchill Livingstone.
- iii. Cunningham Manual of Practical Anatomy Vol. I, II, III, G.J.Romanes (2016) Churchill Livingstone.

Website/Links/Online Portal/ICT

- i. www.teachmeanatomy.info
- ii. <https://opentextbc.ca/anatomyandphysiology>



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Biology (A707102)

Credits: 5
Semester – I

L T P
5 0 0

CO	Statement
CO1	To Analyze the scientific evidence for the explanations of the origin of life.
CO2	To understand various aspects of plant life on earth.
CO3	To get an understanding of the cell cycle to cellular abnormalities such as cancer.
CO4	To gain knowledge of the mechanism for new genetic information.

Course content –

Unit I
(Diversity of Living Organisms)

1. Living and non living things
2. Biological classification (five kingdom classification) -
 - Plant kingdom salient features and classification of plants.
 - Animal kingdom salient features and classification of animals
3. Structural organization in animals and plants –
 - Cell - the unit of life, plant cell and animal cell.
 - Tissues - plant tissue and animal tissue
 - Cell cycle and cell division- cell cycle, mitosis and their significance.
 - Chemical constituents of living cells – function of proteins, carbohydrates, lipids, nucleic and enzymes.
4. Locomotion and Movement-types of movement-ciliary, flagellar, muscular.

Unit II
(Human Physiology)

5. Digestion and absorption- Alimentary canal and digestive glands, digestive disorders- indigestion, constipation, vomiting, jaundice, diarrhoea.
6. Breathing and exchange of Gases- respiratory organs in animals (recall only) respiratory system in human, mechanism of breathing.
7. Body fluids and Circulation: Composition of blood, blood groups, coagulation of blood human circulatory system-
8. Excretory and their elimination human excretory system- structure and function disorders- uraemia, renal failure, renal calculi, nephritis, dialysis and artificial kidney.



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Unit III

(Biology and Human Welfare)

9. **Human Health and Diseases** - Basic concepts of immunology – vaccines, ; Cancer, HIV and AIDs; Adolescence, drug and alcohol abuse.
10. **Ecosystem**- components, ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).
11. **Environmental Issues** - Air pollution and its control; water pollution and its control;; solid waste management; greenhouse effect and climate change; ozone layer depletion; deforestation.

Recommended Books:

- **Fundamental of botany – Singh, Pandey, Jain – 2011 – Tata McGraw Hill**
- **Botany - OP Dyama - 2017 – Sanjiv Parkashan**

Reference Books:

- **Biology – OP Sekesena – 2019 – Pragati Parkashan**



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Diploma in Physiotherapy (D.P.T.)**

**Diploma in Physiotherapy (707)
Physiology (A707103)**

Credits: 5
Semester – I

L T P
5 0 0

CO	Statement
CO1	To study the interactions and interdependency between different human body systems and how organs and cells interact to maintain biological equilibrium.
CO2	To gain skill to Interpret and draw interferences from experimental measures of physiological function including ECG's and spirometry read outs.
CO3	To gain skill to identify how changes in normal physiology lead to disease.

Course Content -

Unit I

1. **Introduction**-Outline of basic concepts of structure and function of a cell, membrane potential
2. **Blood and circulatory system-**
 - Components of blood and their function
 - Blood groups and Blood transfusion
 - Clotting of blood
3. **Respiratory system-**
 - Ventilation – definition and types
 - Exchange of Gases in the lungs
 - Transport of respiratory gases in blood
 - Lung volumes and capacities.
4. **Cardiovascular system –**
 - Properties of the heart muscle – in brief only.
 - Cardiac cycle – Definition and phases in brief.
 - Cardiac Output – Definition and normal value.
 - Blood pressure - Definition and normal value.
 - Heart rate and its regulation in brief.
 - Heart sounds

Unit II

5. **Digestive system-** Functions of following digestive organs –
 - Stomach – gastric juice function
 - Liver and gall bladder
 - Pancreas
 - Intestine – small and large
6. **Nervous system-** Function of
 - Autonomic nervous system
 - Central nervous system
 - Reflex action



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Unit III

7. **Excretory system**- Functions of the kidneys and the skin
8. **Sense organ**- A brief outline of the structure and functions of the eye and ear
9. **Nerve muscle physiology**-
 - Function of neuron
 - Neuromuscular junction

Recommended Books:

- i. Text book of Practical Physiology – Ghai – Jaypee
- ii. Essentials of Medical Physiology, K. Sembulingam (2012) – Jaypee.

Reference Books:

- i. Text book of Medical Physiology –Guyton Arthur (2015) Elsevier,
- ii. Text book of Physiology –Anand & Manchanda (2010) Tata McGraw Hill.



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
English (707104)

Credits: 4
Semester – I

L T P
4 0 0

CO	Statement
CO1	To gain knowledge of the major traditions of literatures written in English.
CO2	To gain skill to identify topics and formulate questions for productive inquiry.
CO3	To gain skills needed to participate in active conversation that build knowledge.

Course content –

Unit I (Grammar)

1. Tense
2. Articles
3. Determiners
4. Preposition
5. Voice,
6. Narration

Unit II (Writing)

1. Paragraph writing
2. Letter writing
3. Resume writing
4. Email writing
5. Notice writing
6. Advertisement writing

Reference Books:

- Oxford practice grammar – John Eastwood – 2004 - Oxford



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Anatomy lab (707105)

Credits: 1
Semester – I

L T P
0 0 2

CO	Statement
CO1	To be able to demonstrate human parts and organs.
CO2	To provide orientation about the internal structure of human body.
CO3	To understand the importance of each bone, joint and muscle along with other structures from clinical point of view.

Course Content –

- **Unit I** - To study bones of the human body
- **Unit II** - Use of models like the liver, kidney, stomach, heart.
- **Unit III** - To study the various classifications of joints.

Recommended Books:

- i. Textbook of Anatomy with colour Atlas – Vol. 1, 2, 3. Inderbir Singh (Third edition), Jaypee Brothers.
- ii. Human Anatomy – Volume 1, 2, 3. B.D. Chaurasia (2017), CBS Publishers & Distributors.

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- ii. Last's Anatomy – Regional and applied, R.M.H. McMinn's (2011), Churchill Livingstone.
- iii. Cunningham Manual of Practical Anatomy Vol. I, II, III, G.J.Romanes (2016) Churchill Livingstone.

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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Biology lab (A707106)

Credits: 1
Semester – I

L T P
0 0 2

CO	Statement
CO1	To gain skill to prepare fungae and bacterial slides.
CO2	To gain skill to examine various haematological parameters.
CO3	To gain practical knowledge human vitals and physiotherapy unit.

Course Content

- **Unit I** - Prepare a model of theoretical topics, Blood group and haemoglobin test, Practical knowledge of ECG (Normal & Deflection), Use of heart rate monitor, Visit to a hospital and physiotherapy unit.
- **Unit II** – Photosynthesis, Flower and flowering parts

Recommended Books:

- **Fundamental of botany – Singh, Pandey, Jain – 2011 – Tata McGraw Hill**
- **Botany - OP Dyama - 2017 – Sanjiv Parkashan**

Reference Books:

- **Biology – OP Sekesena – 2019 – Pragati Parkashan**



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Diploma in Physiotherapy (707)

Physiology lab (707107)

Credits: 1
Semester – I

L T P
0 0 2

CO	Statement
CO1	To gain the skill to examine and interpret vital signs of human body.
CO2	To give orientation about normal and abnormal heart and lung sounds.
CO3	To gain skill to examine various haematological parameters.

Course content -

- **Unit I** - How to check the following – Pulse, Blood pressure, Normal heart rate
- **Unit II** - Respiration- Check the vital capacity and use of spirometer
- **Unit III** - Demonstration of reflex action
- **Unit IV** - Blood test to determine hemoglobin

Recommended Books:

- i. Text book of Practical Physiology – Ghai – Jaypee
- ii. Essentials of Medical Physiology, K. Sembulingam (2012) – Jaypee.

Reference Books:

- i. Text book of Medical Physiology –Guyton Arthur (2015) Elsevier,
- ii. Text book of Physiology –Anand & Manchanda (2010) Tata McGraw Hill.



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Biochemistry (A707201)

Credits: 5
Semester – II

L T P
5 0 0

CO	Statement
CO1	To gain basic concepts regarding nutrition and its constituents.
CO2	To gain knowledge regarding the importance, source and metabolism of carbohydrates, lipids, proteins and vitamins.
CO3	To gain deep understanding of many of the chemical reactions and structures of biological molecules essential to life on earth

Course content –

Unit I

1. **Cell**- Morphology, structure and kinetics of cell, cell membrane, nucleus, chromatin, Mitochondria, endoplasmic reticulum, ribosome's
2. **Carbohydrates**- Definition, functions, sources, classifications, monosaccharide's, Disaccharides, polysaccharides, mucopolysaccharides and its importance.

Unit II

3. **Lipids**- Definition, function, sources, classification, simple lipid, compound lipid, derived lipid, Unsaturated and saturated fatty acid. Blood lipids and their implications, cholesterol and its importance
4. **Proteins**- Definition, sources, classification, simple protein, conjugated protein, Derived proteins, properties of proteins

Unit III

5. **Nucleic acid**- Structure and function of DNA and RNA, nucleosides, nucleotides, genetic code.
6. **Enzymes**- Definitions, classification, factors affecting enzyme action, clinical Importance of enzyme
7. **Vitamins**- Classification, fat soluble vitamins, water soluble vitamins, daily requirements, Physiological functions and diseases of vitamin deficiency

Recommended Books:

- Medical Biochemistry for Physiotherapy students- Harpreet Kaur, Jagmohan Singh- 2008 - Jaypee publishers
- Concept of Biochemistry for physiotherapy- S.P Singh- 2019 - CBS publishers

Reference books:

- Textbook of Biochemistry- Chatterjee M.N(2012).-Jaypee Brothers.
- Textbook of Biochemistry for Medical Students - Vasudeval D.M.(2019) - Jaypee Brothers.



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Diploma in Physiotherapy (D.P.T.)**

**Diploma in Physiotherapy (707)
Biomechanics (A707202)**

Credits: 5
Semester – II

L T P
5 0 0

CO	Statement
CO1	To understand the basic concepts of clinical biomechanics.
CO2	To gain skill to differentiate the normal and pathological gait.
CO3	To gain skill to analyze and evaluate the movement in the joints.

Course content –

Unit I

1. Introduction to mechanics –
 - Motion – type and duration
 - Force - definition , parallel force system, concurrent force systems, work
2. Newton’s law of motion
3. Centre of gravity, line of gravity, stability and equilibrium
4. Introduction to bio-mechanics and terminology
5. Starting positions

Unit II

6. Basic principle of joint design
7. Tissues present in human joint including fibrous tissue, bone, cartilage and connective tissue
8. Classification of joints
9. Joint function
10. Joint motion - kinematics chains and range of motion

Unit III

11. Muscle structure and function
 - Mobility and stability functions of muscle
 - Elements of muscle structure and its properties
 - Types of muscle contractions and muscle work
 - Classification of muscles and their functions
 - Group action of muscles
 - Co-ordinate movement

Unit IV

12. Posture- Definition, factors responsible for posture, relationship of gravity on posture
13. Posture imbalance- factors responsible for imbalance in static and dynamic positions including ergonomics

Recommended books:

- Joint Structure and Function – A Comprehensive Analysis - Norkins & Levangie(2011) - F.A. Davis.
- Measurement of Joint Motion – A Guide to Goniometry - Norkins & White (2009) - F.A. Davis.



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Reference books -

- Brunstrom's Clinical Kinesiology - Smith et al (2011)- F.A. Davis.
- Basic Biomechanics explained - Low & Reed(2000) - Butterworth Heinmann.
- Kinesiology: Applied to Pathological Motion (1996)- Soderberg Lippincott.



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Kinesiology (A707203)

Credits: 5
Semester – II

L T P
5 0 0

CO	Statement
CO1	To apply knowledge and skills required to assess human performance related characteristics of individuals from diverse populations.
CO2	To be able to apply scientific principles in the creation of exercise programs for various populations
CO3	To gain ability to evaluate the effectiveness of human movement using mechanical principles.

Course content –

Unit I

1. Introduction: Definition of Kinesiology, need in physiotherapy.
2. Skeleton system and human movement, skeleton muscles and structural classification, directional terminology for muscles attachment.
3. Types of muscular contraction: (isotonic, isometric, is kinetic). Axis and planes of movement, line of pull. Role of Muscles (Agonists, Antagonist, stabilizer, Neutralizer).

Unit II

4. Shoulder girdle and hip joint: movement and description of muscles.
5. Elbow joint and knee joint: movement and description of muscles.
6. Wrist joint and ankle joint: movement and description of muscles.
7. Hand complex and Foot complex - movement and description of muscles.
8. Gait - General features of Normal gait, Gait deviations – Types, Causative factors and analysis.

Recommended books:

- Textbook of work physiology, Astrand and Rodahl: 2003 – McGraw Hill
- Kinesiology, Cooper & Glassow: 1963 – Mosby

Reference books -

- Applied kinesiology - Jenson & Schultz:1977 – McGraw Hill
- Physiology of exercise, Miller & Morehouse: 1976 – Mosby
- Kinesiology and applied anatomy, Rasch & Burke: 1993 - Lea & Febiger



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Sociology (A707204)

Credits: 4
Semester – II

L T P
4 0 0

CO	Statement
CO1	Students will exhibit knowledge of the underlying economic, cultural and political factors that effect or determine the structure of society.
CO2	Students will demonstrate an understanding of race, class and gender inequality
CO3	To study about social norms and values.

Course content –

Unit I

1. **Sociology:** definition, nature and scope
2. **Social Structure:** Definition characteristics and types
3. **Society:** definition, characteristics type.
4. **Community and association**
5. **Social Process:** Concepts, meaning, kinds.
6. **Socialization** in hospitals, socialization in the rehabilitation of patients

Unit II

7. **Socialization:** definition, process, stages and agencies.
8. **Culture:** definition, characteristics and types
9. **Social Worker:** Role of medical social worker.
10. **Family:** Meaning, definition, types, features and functions.

Recommended Books:

- Kupuswamy - Social Changes in India – (2006) - Vikas, Delhi.
- Ahuja - Social Problems – (2014) - Bookhive, Delhi.

References Books:

- Sociology – McGee (2016) - Drydon Press Illinois.
- Principles of Sociology – F.H. Giddings (2004) – Motilal UK Books of india.
- Psychology & Sociology applied to medicine - Porter & Alder (2019) -W.B. Saunders.
- Social Problems - Julian – (2020) - Prentice Hall.



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Biomechanics lab (707205)

Credits: 2
Semester – II

L T P
0 0 4

CO	Statement
CO1	To practically determine the center of gravity of any object.
CO2	To gain practical skill to analyze the planes and axis for various joint movements.
CO3	To study the individual action and group action of different human muscles.

Course content –

Unit I

1. To study the effects of forces on objects
2. To find out the C.G of an object
3. To identify axis and planes of motion at the joints

Unit II

4. To study the different types of muscle contraction, muscle work, group action of muscles of co-ordinate movements
5. Analysis of normal posture

Recommended books:

- Joint Structure and Function – A Comprehensive Analysis - Norkins & Levangie(2011) - F.A. Davis.
- Measurement of Joint Motion – A Guide to Goniometry - Norkins & White (2009) - F.A. Davis.

Reference books -

- Brunnstrom's Clinical Kinesiology - Smith et al (2011)- F.A. Davis.
- Basic Biomechanics explained - Low & Reed(2000) - Butterworth Heinmann.
- Kinesiology: Applied to Pathological Motion (1996)- Soderberg Lippincott.



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Diploma in Physiotherapy (707)
Kinesiology lab (707206)

Credits: 2
Semester – II

L T P
0 0 4

CO	Statement
CO1	To understand the normal degrees of movement at various joints.
CO2	To gain skill to differentiate in normal and abnormal movements and deformities.
CO3	To gain skill in demonstrating efficiency tests for respiratory system.

Course content –

Unit I

1. Examination of body joints-degree of Movement, type of movement, abnormal movement, deformities.
2. Examination of urine, physical, chemical, microscopic.
3. Marking of bones for insertion and origin of skeletal muscle.

Unit II

4. Various efficiencies tests: vital capacity, breath holding test, expiratory force test and persistence test.
5. Various Cordial Efficiency Tests:
 - (i) Heart at Rest
 - (ii) Blood Pressure at rest and during exercise.

Recommended books:

- Textbook of work physiology, Astrand and Rodahl: 2003 – McGraw Hill
- Kinesiology, Cooper & Glassow: 1963 – Mosby

Reference books -

- Applied kinesiology - Jenson & Schultz:1977 – McGraw Hill
- Physiology of exercise, Miller & Morehouse: 1976 – Mosby
- Kinesiology and applied anatomy, Rasch & Burke: 1993 - Lea & Febiger



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Diploma in Physiotherapy (D.P.T.)**

**Diploma in Physiotherapy (707)
Electrotherapy-I (A707301)**

Credits: 5
Semester – III

L T P
5 0 0

CO	Statement
CO1	To understand and identify the clinical relevance of various electrotherapy modalities.
CO2	To learn clinical reasoning and decision making in the context of assessment and management of a variety of clinical conditions
CO3	To gain knowledge about indications, contraindications, physiological-therapeutic effects, dangers and precautions during clinical application of these modalities.

Course Content –

Unit I

1. Introduction – Basic types of currents
 - Direct Current: types, physiological & therapeutic effects.
 - Alternating Current
2. Low frequency currents
 - EMS- Electrical stimuli and normal behavior of nerve and muscle tissue
 - Types of lesions and development of reaction of degeneration
 - Faradic- Definition , Physiological & Therapeutic effects of Faradic Current, Precautions, Indications & Contra-Indications, and Dangers.

Unit II

3. TENS (Transcutaneous electrical nerve stimulation)-
 - Definition
 - Types of Electrodes & Placement of Electrodes
 - Dosage parameters
 - Physiological & Therapeutic effects Indication and contraindication

Unit III

4. Superficial heat-
 - Paraffin wax bath- Definition, Indication and contraindication, Methods of application of Wax, Physiological & Therapeutic effects
 - Hydro collator- Definition, Indication and contraindication, Methods of applications, Therapeutic uses.

Unit IV

5. Infrared rays-
 - Definition, Physiological & Therapeutic effects
 - Duration & frequency of treatment
 - Indication and Contraindication



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6. IFT (Interferential Therapy)-
- Definition
 - Dosage Parameters
 - patient preparation and Electrode placement in IFT
 - Physiological & Therapeutic effect
 - Indication and contraindication

Recommended Books:

- Electrotherapy Explained: Principles & Practice Low & Reed, Butterworth Heinemann.
- Claytons Electro therapy, Forster & Palastange (2005), CBS publishers

Reference Books:

- Therapeutic Heat & Cold, Lehmann, Willians & Wilkins.
- Textbook of Electrotherapy, Jagmohan Singh (2012), Jay pee publishers.
- Principles & Practice of Electrotherapy, Joseph Kahn(2000) Churchill Livingstone.



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Diploma in Physiotherapy (D.P.T.)**

**Diploma in Physiotherapy (707)
Exercise Therapy -I (A707302)**

Credits: 5
Semester – III

L T P
5 0 0

CO	Statement
CO1	To gain knowledge of the basic concepts of therapeutic exercises.
CO2	To gain skill of various therapeutic exercises for different conditions
CO3	To develop skill to plan an exercise protocol for the specific condition.
CO4	To gain skill to modify and improve exercise therapy outcomes in relation to patients needs and abilities

Course content

Unit I

1. Introduction to exercise therapy-Aims, principle, techniques and general areas of its application.
2. Description of fundamental starting positions and derived positions including joint positions, muscle work, stability, effects and uses
 - Standing
 - Kneeling
 - Sitting
 - Lying
 - Hanging

Unit II

3. Introduction to movements –
 - analysis of joint motion
 - muscle work
 - neuro muscular coordination
4. Classification of movements- Describe the types, technique of application, indications, contraindication, effects and uses of the following
 - Active movement
 - Passive movement
 - Active assisted movement
 - Resisted movement
5. Goniometry-
 - Parts, types, Principle, techniques and uses.
 - Testing position, procedure and measurement of ROM of the joints of upper, lower limbs and trunk

Unit III

6. Therapeutic massage
 - History, various types of soft tissue manipulation techniques.
 - Physiological and therapeutic effects of soft tissue manipulation.



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- Classify, define and describe- effleurage, stroking, kneading, petrissage, deep friction, vibration and shaking etc.
 - Preparation of patient, effects, uses, indications and contraindications
7. Therapeutic Gymnasium-
- Gymnasium and its importance
 - Various equipments in gymnasium - Static cycle, Pulley, Wheel, Quadriceps chair, CPM, Ankle and heel exerciser, Physio balls, Weight cuffs

Recommended Books:

- i. Therapeutic Exercises Foundations and Techniques - Kisner and Colby (2007)F.A. Davis Company.
- ii. The Principle of Exercise Therapy -Gardiner (2005) - C.B.S. Delhi.

Reference Books:

- i. Practical Exercise Therapy – Margaret Hollis(1999) - Blackwell Scientific Publications.
- ii. Therapeutic Exercises – Basmajian and Wolf (1990) - Williams and Wilkins.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
First aid and its management (707303)

Credits: 5
Semester – III

L T P
5 0 0

CO	Statement
CO1	Describe the purpose of and demonstrate CPR for an adult
CO2	List the basic steps for burn care
CO3	Identify the most important step one can take in a life threatening emergency

Course content –

- **Unit I** - First Aid
- **Unit II** - Biomedical waste Management
- **Unit III** - ICU Management
- **Unit IV** - PT Management of burns



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Computer Application (707303)

Credits: 4
Semester – III

L T P
4 0 0

CO	Statement
CO1	To be skilled in basics of computer hardware and software.
CO2	To be skilled in applications of computers in physiotherapy
CO3	Apply logical skills to programming in a variety of languages.
CO4	To be skilled in utilizing web technologies.

Course content –

- **Unit I** - Introducing the personal computer- what is computer, applications of computer in education, benefits and limitations of computers, parts of a PC, the input process output cycle, input devices, output devices, processing devices, storage
- **Unit II** - Introduction to Microsoft windows XP- software and data, windows desktop Getting started with Microsoft windows XP- using the start menu, changing settings, using applications in windows, shutting down windows
Organizing data- working with disks, drives and folders
- **Unit III** - Working with Microsoft software applications- creating a simple presentation with power point
 - Working with slides in power point
 - Creating a simple document in Microsoft word
 - Editing and formatting a Microsoft word document
 - Creating tables in Microsoft word

Recommended Books:

- Computer Fundamentals - P.K. Sinha – 2004 – BPB Publications
- Computer fundamental and PC Softwares - Rachpal Singh & Gurinder Singh – 2015 – Kalyani Publishers.

Reference Books -

- R.K. Texali - PC Softwares – 2017 – Mc Graw hill.
- Internet to Go - Alan Simpson – 1999 – Sybax Inc.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)**

**Diploma in Physiotherapy (707)
Electrotherapy-I lab (707305)**

Credits: 1
Semester – III

L T P
0 0 2

CO	Statement
CO1	To gain the hand of techniques for various therapeutic methods.
CO2	To gain skill of application of these modalities in various conditions.
CO3	To gain knowledge for indications and contraindications for using different modalities.
CO4	To memorise precautions before applying any modality to the patient.

Course Content –

Unit I

- To study a hydro collator unit its operations and therapeutic application of hot packs region wise
- To study the various types of infrared lamps and their application to body region wise

Unit II

- To study a paraffin wax bath unit, its operation and different methods of application
- To study a TENS stimulators, its operation and application region wise

Unit III

- To study a IFT, its operation and application region wise
- To locate and stimulate different motor points region wise, including upper, lower limb and trunk

Recommended Books:

- Electrotherapy Explained: Principles & Practice Low & Reed, Butterworth Heinemann.
- Claytons Electro therapy, Forster & Palastange (2005), CBS publishers

Reference Books:

- Therapeutic Heat & Cold, Lehmann, Willians & Wilkins.
- Textbook of Electrotherapy, Jagmohan Singh (2012), Jay pee publishers.
- Principles & Practice of Electrotherapy, Joseph Kahn(2000) Churchill Livingstone.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Exercise Therapy-I lab (707306)

Credits: 1
Semester – III

L T P
0 0 2

CO	Statement
CO1	To gain the hand of techniques for various therapeutic methods.
CO2	To explore areas for framing exercise protocols for patient recovery.
CO3	To develop skill to plan an exercise protocol for the specific condition and deal with body dysfunctions and disorders.

Course content –

Unit I

1. To practice all the soft tissue manipulative techniques region wise- upper, lower, neck, back etc
2. To practice the measurement of ROM of joints- upper, lower limbs and trunk

Unit II

3. To study the position of joints in various fundamental and derived positions
4. To study the stability in various fundamental and derived positions
5. To study the muscle work of various fundamental and derived positions

Unit III

6. To study the various therapeutic Gymnasium equipments
7. To practice all the Active and Passive movements region wise

Recommended Books:

- i. Therapeutic Exercises Foundations and Techniques - Kisner and Colby (2007)F.A. Davis Company.
- ii. The Principle of Exercise Therapy -Gardiner (2005) - C.B.S. Delhi.

Reference Books:

- i. Practical Exercise Therapy – Margaret Hollis(1999) - Blackwell Scientific Publications.
- ii. Therapeutic Exercises – Basmajian and Wolf (1990) - Williams and Wilkins.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Computer Application lab (707307)

Credits: 1
Semester – III

L T P
0 0 2

CO	Statement
CO1	To practice the operational skills of common computer applications.
CO2	To study various components of a personal computer.
CO3	To learn the skills of web surfing.

Course content

- **Unit I** - To study various components of a personal computer
- **Unit II** - To have working knowledge of hardware and software
- **Unit III** - To practice the operational skills of common computer applications
- **Unit IV** - To have a basic knowledge of utility of multimedia and To learn skills of web surfing

Recommended Books:

- Computer Fundamentals - P.K. Sinha – 2004 – BPB Publications
- Computer fundamental and PC Softwares - Rachpal Singh & Gurinder Singh – 2015 – Kalyani Publishers.

Reference Books -

- R.K. Texali - PC Softwares – 2017 – Mc Graw hill.
- Internet to Go - Alan Simpson – 1999 – Sybax Inc.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Electrotherapy-II (A707401)

Credits: 5
Semester – IV

L T P
5 0 0

CO	Statement
CO1	To understand and identify the clinical relevance of various electrotherapy modalities.
CO2	To learn clinical reasoning and decision making in the context of assessment and management of a variety of clinical conditions
CO3	To gain knowledge about indications, contraindications, physiological-therapeutic effects, dangers and precautions during clinical application of these modalities.

Course content –

Unit I

1. High frequency currents (SWD)
 - Definition
 - Physiological & Therapeutic effects
 - Indication, contraindication and dangers.
2. MWD
 - Definition
 - Indication, contraindication and dangers.
 - Dosage Parameters
 - Physiological & Therapeutic effects
3. High frequency sound waves (Ultrasound)
 - Definition
 - Indication, contraindication and dangers.
 - Physiological & Therapeutic effects.

Unit II

4. Therapeutic cold (Cryotherapy)
 - Definition
 - Techniques of Applications
 - Indication, contraindication and dangers.
 - Physiological & Therapeutic effects.



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Unit III

5. Laser-

- Definition, Indication and contraindication
- Indication, contraindication and dangers.
- Physiological & Therapeutic effects.

Recommended Books:

- Electrotherapy Explained: Principles & Practice Low & Reed, Butterworth Heinemann.
- Claytons Electro therapy, Forster & Palastange (2005), CBS publishers

Reference Books:

- Therapeutic Heat & Cold, Lehmann, Willians & Wilkins.
- Textbook of Electrotherapy, Jagmohan Singh (2012), Jay pee publishers.
- Principles & Practice of Electrotherapy, Joseph Kahn(2000) Churchill Livingstone.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Exercise Therapy-II (A707402)

Credits: 5
Semester – IV

L T P
5 0 0

CO	Statement
CO1	Co1. To gain knowledge of the basic concepts of therapeutic exercises.
CO2	Co2. To gain skill of various therapeutic exercises for different conditions
CO3	Co3. To develop skill to plan an exercise protocol for the specific condition.
CO4	Co4. To gain skill to modify and improve exercise therapy outcomes in relation to patients needs and abilities

Course Content –

Unit I

1. Relaxation

- Describe relaxation, muscle fatigue, muscle spasm and tension
- Factors contributing to fatigue and tension
- Techniques of relaxation
- Effects, uses and clinical application
- Indication and contraindication

2. Muscle insufficiency-

- Etiogenesis of muscle insufficiency (strength, tone, endurance, volume)
- General techniques of strengthening
- Effects, indication, contraindications and precautions

Unit II

3. Functional reeducation- General therapeutic techniques to reeducate ADL function

4. Posture and balance-

- Normal posture- Overview of the mechanism of normal posture
- Abnormal posture- Assessment, types, etiogenesis, management including therapeutic exercises
- Static and dynamic balance- Assessment and management including therapeutic exercises

Unit III

5. Traction

- Principles of traction
- Physiological and therapeutic effects
- Classification
- Indications, contraindications
- Techniques of application, operational skills and precautions

6. Breathing mechanism

- Normal breathing,



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- Types, techniques, indications, contraindications, therapeutic effects and precautions of breathing exercises.
- Postural drainage

Recommended Books:

- i. Therapeutic Exercises Foundations and Techniques - Kisner and Colby (2007) F.A. Davis Company.
- ii. The Principle of Exercise Therapy -Gardiner (2005) - C.B.S. Delhi.

Reference Books:

- i. Practical Exercise Therapy – Margaret Hollis(1999) - Blackwell Scientific Publications.
- ii. Therapeutic Exercises – Basmajian and Wolf (1990) - Williams and Wilkins.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Pathology (707403)

Credits: 5
Semester – IV

L T P
5 0 0

CO	Statement
CO1	To gain knowledge about the basic mechanisms of human diseases.
CO2	Explain the principles of inflammation and its relationship to disease and to therapeutic intervention
CO3	To gain a broader understanding of the cellular mechanisms for the development of certain major disease processes.

Course content –

Unit I

1. Introduction- Concepts of diseases, classification of disease
2. Bacterial, viral and parasitic infections, a general outline
3. Necrosis and gangrene

Unit II

4. Hemorrhage, shock, embolism, thrombus
5. Tuberculosis and leprosy
6. Respiratory system- Pneumonias, bronchiectasis, emphysema, chronic bronchitis, asthma

Unit III

7. Bone and joints- Autoimmune disease, septic arthritis, osteomyelitis
8. Diseases of muscle- Poliomyelitis
9. Deficiency diseases

Recommended books:

- Text book of Pathology - Harsh Mohan – (2010) - Jaypee Brothers.
- Essential of Medical Microbiology - Bhatia & Lal – (2008) - Jaypee Brothers.

Reference books -

- Robbins Pathological Basis of Disease - Cotran, Kumar & Robbins – (2020) - W.B. Saunders.
- General Pathology - Walter & Israel – (1996) - Churchill Livingstone.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Psychology (707404)

Credits: 4
Semester – IV

L T P
4 0 0

CO	Statement
CO1	To get acquainted with the meaning, nature and scope of sports Psychology.
CO2	To be skilled in conduction of various Psychological Tests on patients.
CO3	Describe the major approaches to understanding behavioural processes involved in learning and memory

Course content –

Unit I

1. **Psychology**- Definition of psychology, information in relation to schools, methods and branches
2. **Heredity and environment** – Twins, relative importance of heredity and environment, their Role in relation to physical characteristics, intelligence and personality, nature

Unit II

3. **Development and growth behavior**- Infancy, childhood, adolescence, adulthood, middle age, Old age
4. **Intelligence**- Definition, IQ, mental age, list of various intelligence test
5. **Stress**- Physiological and psychological relation to health and sickness, psychosomatic, Professional stress burnout

Reference

- Baron, Robert A Psychology, Printer Hall of India Pvt Ltd. New Delhi.
- Carson, Robert C. and James Butcher, Normal Psychology and Modern Life. Herber colleen publishers.
- Psychology for Physiotherapist- M.T Ramalingam- Jaypee publishers



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Electrotherapy-II lab (707405)

Credits: 2
Semester – IV

L T P
0 0 4

CO	Statement
CO1	To give orientation about various electrotherapy modalities.
CO2	To gain skill of application of these modalities in various conditions.
CO3	To gain knowledge for indications and contraindications for using different modalities.
CO4	To memorise precautions before applying any modality to the patient.

Course content –

Unit I

1. To study a short wave diathermy unit, its operation and different methods of application-region wise
2. To study a microwave diathermy, its operation and different methods of application-region wise
3. To study a ultrasound unit, its operation and different methods of application-region wise

Unit II

4. To study various forms of therapeutic cold application region wise including ice, cold packs, vapor coolant sprays etc
5. To study a laser, its operation and different methods of application.

Unit III

6. To study vacuum therapy, its operation and application.
7. To study a Long wave therapy, its operation and different methods of application
8. To study a Intermittent Compression Therapy, its operation and application

Recommended Books:

- Electrotherapy Explained: Principles & Practice Low & Reed, Butterworth Heinemann.
- Claytons Electro therapy, Forster & Palastange (2005), CBS publishers

Reference Books:

- Therapeutic Heat & Cold, Lehmann, Willians & Wilkins.
- Textbook of Electrotherapy, Jagmohan Singh (2012), Jay pee publishers.



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Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Exercise Therapy-II lab (707406)

Credits: 2
Semester – IV

L T P
0 0 4

CO	Statement
CO1	To gain the hand of techniques for various therapeutic methods.
CO2	To explore areas for framing exercise protocols for patient recovery.
CO3	To develop skill to plan an exercise protocol for the specific condition and deal with body dysfunctions and disorders.

Course content –

Unit I

1. To study and practice local and general relaxation techniques
2. To study and practice the various techniques of progressive strengthening exercises of muscle region wise

Unit II

3. To study and practice mat exercises
4. To assess and evaluate normal and abnormal posture and practice various corrective techniques

Unit III

5. To assess and evaluate equilibrium/ balance and practice various techniques to improve balance
6. To study and practice various traction techniques including manual, mechanical and electrical procedures

Recommended Books:

- i. Therapeutic Exercises Foundations and Techniques - Kisner and Colby (2007)F.A. Davis Company.
- ii. The Principle of Exercise Therapy -Gardiner (2005) - C.B.S. Delhi.

Reference Books:

- i. Practical Exercise Therapy – Margaret Hollis(1999) - Blackwell Scientific Publications.
- ii. Therapeutic Exercises – Basmajian and Wolf (1990) - Williams and Wilkins.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Microbiology (707501)

Credits: 5
Semester – V

L T P
5 0 0

CO	Statement
CO1	Use an understanding of the normal and common pathogenic organisms associated with human infectious diseases
CO2	Calculate , record and report clinical microbiology results according to clinical laboratory protocol

Course content

Unit I

- Introduction and history of microbiology
- Micro-organism-
 - Classification
 - Shape and arrangement
 - Special characteristics

Unit II

- Disinfection and antiseptics
- Sterilization and asepsis
- Infection- Source of infection, portals of entry, spread of infection

Unit III

- Allergy and hypersensitivity
- Outline of common pathogenic bacteria and diseases produced by them
Treatment and prevention
 - Respiratory tract infections
 - Leprosy, tuberculosis and miscellaneous infections
 - Meningitis

Recommended books:

- Text book of Pathology - Harsh Mohan – (2010) - Jaypee Brothers.
- Essential of Medical Microbiology - Bhatia & Lal – (2008) - Jaypee Brothers.

Reference books -

- Robbins Pathological Basis of Disease - Cotran, Kumar & Robbins – (2020) - W.B. Saunders.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
PT in Orthopedics (A707502)

Credits: 5
Semester – V

L T P
5 0 0

CO	Statement
CO1	To demonstrate an understanding of musculoskeletal trauma including fracture classification and soft tissue injury grades.
CO2	To understand the role of physiotherapy in various soft tissue conditions.
CO3	To gain skill to choose and apply appropriate physiotherapy management for a routine orthopaedic problem
CO4	To provide physiotherapy treatment for various orthopaedic conditions.

Course content -

Unit I

1. Introduction:

- Introduction to Orthopaedics
- Clinical examination in an Orthopaedic patient.
- Common investigative procedures.
- Radiological and Imaging techniques in Orthopaedics.

2. Fractures and dislocations- General principles, outline the following

- Types of fractures including patterns
- Open and closed fractures and fracture- dislocations
- Differences between dislocation and subluxation
- General and local signs and symptom of fractures and dislocation
- Principle of management of fractures and dislocations
- Fracture healing

Unit II

3. Bone and joint infections- Outline the etiology, clinical features, management and complications of septic arthritis, osteomyelitis
4. Chronic arthritis- Outline of pathology- clinical features, mechanism of deformities, management and complications of rheumatoid arthritis, osteoarthritis, Ankylosing spondylitis

Unit III

5. Poliomyelitis- Describe the pathology, microbiology, prevention, management and Complications of polio. Outline the treatment of residual paralysis
6. Sprain and strain- General outline and list of common sites of sprains and muscle strains.



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Diploma in Physiotherapy (D.P.T.)

7. Metabolic bone disease –rickets, osteomalacia, osteopenia, osteoporosis.

Recommended Books:

- Tidy's Physiotherapy, Ann Thomasons – 2013 - Varghese publishing House.
- Physical Rehabilitation Assessment and Treatment, Susan Sullivan – 2013 - Jaypee brothers

Reference Books -

- Apley's system of Orthopaedics and fractures -Louis Solomon, David J. Warwick - 2015 - Arnold Publishers, London
- Turek's Orthopaedics: Principles and their Application , Weinstein SL and Buckwalter JA – 2016 – Lippincott.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)**

**Diploma in Physiotherapy (707)
Orthotics & Prosthetic (A707503)**

Credits: 5
Semester – V

L T P
5 0 0

CO	Statement
CO1	Describe the main components of selected prosthetic devices and be able to define the role of each component in controlling motion
CO2	Demonstrate the ability to provide direct physical therapy intervention to the patient with an amputation designed to maximize patient outcomes
CO3	Differentiate the components and functions of shoes, lower limb orthosis and spinal orthosis
CO4	Appropriately explain orthotic wearing schedules to patients

Course content –

Unit I

1. Conceptual framework of rehabilitation, role of rehabilitation, team members, definitions and various models of rehabilitation
2. Community based rehabilitation
3. Role of NGO in rehabilitation of the persons with disabilities

Unit II

4. Walking aids
5. Principles of orthotics- Types, indications, contraindications, assessment (check out), uses and fitting- region wise
6. Fabrication of simple splints and self help devices for upper and lower extremity- indications and application

Unit III

7. Definition, scope & importance of Activities of Daily Living (ADLs).
8. The teaching and training of
 - wheel chair activities
 - bed activities
 - transfer activities
 - Locomotor activities
 - Self care activities, such as toilet, eating, dressing etc.

Recommended Books:

- Physical Rehabilitation – Assessment and Treatment – Sullivan & Schmitz – 2013 - F. A. Davis.
- Textbook of Rehabilitation – Sunder – 2005 – Jaypee publishers

Reference books:

- Orthotics in Rehabilitation : Mckee and Morgan – 1998 - F. A. Davis
- Atlas of Limb Orthotics and Limb Prosthetics American Academy of Orthopedic Surgeons – Mosby.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)**

**Diploma in Physiotherapy (707)
PT in Neurology (A707504)**

Credits: 5
Semester – V

L T P
5 0 0

CO	Statement
CO1	To gain clinical skill to for evaluation and management of complex neurological conditions.
CO2	To be able to justify situations in which physiotherapy interventions is no longer required and if relevant, identify future management options
CO3	To do advanced studies in physiotherapy practice related to neurological conditions.

Course content –

Unit I

1. Neuroanatomy- Review the basic anatomy of the brain and spinal cord
2. Assessment and evaluation procedures for the neurological patient

Unit II

- Briefly outline the etiogenesis, clinical features and physiotherapy management of the following neurological disorders-
3. Congenital and childhood disorders- Cerebral palsy, Hydrocephalus, Spina Bifida, Parkinsonism.
 4. Demyelinating diseases- Guillain Barre Syndrome
 5. Cerebrovascular accidents- Stroke
 6. Myasthenia Gravis
 7. Degenerative disorders- Parkinson disease
 8. Infections- Tuberculosis, Poliomyelitis
 9. Trauma- Spinal cord Injury
 10. Peripheral nerve injuries (Sedans’ & Sunderland Classification)
 11. General outline about tumors

Recommended Books:

- Cash Textbook of Neurology for Physiotherapists - Downi – 1993 - J.P. Brothers.
- Physical Rehabilitation Assessment and Treatment, Susan Sullivan – 2013 - Jaypee brothe

Reference books:

- Cash Textbook of Neurology for Physiotherapists - Downi – 1993 - J.P. Brothers.
- Physical Rehabilitation Assessment and Treatment, Susan Sullivan – 2013 - Jaypee brothers



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
PT in Orthopedics lab (707505)

Credits: 1
Semester – V

L T P
0 0 2

CO	Statement
CO1	To provide practical exposure to subjective and objective assessment of the patients.
CO2	To study the role of physiotherapy in various soft tissue conditions.
CO3	To gain skill to choose and apply appropriate physiotherapy management for a routine orthopaedic problem

Course content-

- **Unit I** - Various physiotherapy modalities and treatment techniques for the above mentioned conditions to be demonstrated and practiced by the students in clinical setup

Recommended Books:

- Tidy's Physiotherapy, Ann Thomasons – 2013 - Varghese publishing House.
- Physical Rehabilitation Assessment and Treatment, Susan Sullivan – 2013 - Jaypee brothers

Reference Books -

- Apley's system of Orthopaedics and fractures -Louis Solomon, David J. Warwick - 2015 - Arnold Publishers, London
- Turek's Orthopaedics: Principles and their Application , Weinstein SL and Buckwalter JA – 2016 – Lippincott.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Orthotics & Prosthetic lab (707506)

Credits: 1
Semester – V

L T P
0 0 2

CO	Statement
CO1	To understand the basic principles for orthosis.
CO2	To be able to detect gait deviations and compensations.
CO3	To apply the gait analysis skills for analyzing and understanding the mechanics of gait of patients with an amputation and patients with lower extremity orthoses.
CO4	To study about fabrication of simple splints and their application.

Course content –

- **Unit I** - To study and practice the use of various ambulation aids
- **Unit II** - To study and practice the use of orthotics & Prosthesis- region wise
- **Unit III** - To study and practice the use of splints

Recommended Books:

- Physical Rehabilitation – Assessment and Treatment – Sullivan & Schmitz – 2013 - F. A. Davis.
- Textbook of Rehabilitation – Sunder – 2005 – Jaypee publishers

Reference books :

- Orthotics in Rehabilitation : Mckee and Morgan – 1998 - F. A. Davis
- Atlas of Limb Orthotics and Limb Prosthetics American Academy of Orthopedic Surgeons – Mosby.



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UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
PT in Neurology lab (707507)

Credits: 1
Semester – V

L T P
0 0 2

CO	Statement
CO1	To provide practical exposure to subjective and objective assessment of neuro patients.
CO2	To study the role of physiotherapy in various neurological conditions.
CO3	To gain skill to choose and apply appropriate physiotherapy management for various neurological problems.

Course content -

- **Unit I** - Various physiotherapy modalities and treatment techniques for above mentioned conditions should be demonstrated and practiced by the student

Recommended Books:

- Cash Textbook of Neurology for Physiotherapists - Downi – 1993 - J.P. Brothers.
- Physical Rehabilitation Assessment and Treatment, Susan Sullivan – 2013 - Jaypee brothe

Reference books:

- Cash Textbook of Neurology for Physiotherapists - Downi – 1993 - J.P. Brothers.
- Physical Rehabilitation Assessment and Treatment, Susan Sullivan – 2013 - Jaypee brothers



GURU KASHI UNIVERSITY, TALWANDI SABO
UNIVERSITY COLLEGE OF PHYSICAL EDUCATION
Diploma in Physiotherapy (D.P.T.)

Diploma in Physiotherapy (707)
Internship (707601)

Credits: 20
Semester – VI

CO	Statement
CO1	To gain practical experience in outpatient physiotherapy setting.
CO2	To become familiar with the professional expectations and responsibilities of a physiotherapist.
CO3	To become familiar with the daily operations and administrative details of a physiotherapy setting.

Course content -

- **Project work**

Semester: 5th

Sr.	Subject Code	Subject Name	Type of Subject	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	707501	Microbiology	T	5	0	0	5	50	50	100
2	A707502	PT in Orthopedics	T	5	0	0	5	50	50	100
3	A707503	Orthotics & Prosthetic	T	5	0	0	5	50	50	100
4	A707504	PT in Neurology	T	4	0	0	4	50	50	100
5	707505	PT in Orthopedics Lab	P	0	0	2	1	50	50	100
6	707506	Orthotics & Prosthetic Lab	P	0	0	2	1	50	50	100
7	707507	PT in Neurology Lab	P	0	0	2	1	50	50	100
Total No. of Credits				22						

Semester: 6th

Sr.	Subject Code	Subject Name	Type of Subject	(Hours Per Week)			No. of Credits	Internal Marks	External Marks	Total Marks
				L	T	P				
1	707601	Internship	NA	NA	NA	20	500	500	1000	
Total No. of Credits				20						