

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Physiology

Programme : BACHELOR OF PHYSIOTHERAPY(BPT) ANNUALLY

Yearly : 1st year

Name of the Teacher: Dr. Jaswant Kaur

Availability Timings: 9.00 AM to 3.30 PM

E-mail: www.Dr.jaswantphysiotherapylkc@gmail.com

Objectives of the Course:

This course aims at acquainting students with **General Introduction, Physiology of the systems of the body, Neuro – Physiology, Muscle Physiology, Physiology of exercise and work.**

Course Content:

The course provides an introduction to the

1. **Cell Introduction:** Outline of basic concepts of cell structure, functions of components and transport across membranes
2. **Skin:** Functions, blood flow and temperature regulation.
3. **Blood and Lymph:** Cell renewal system, haemoglobin, erythrocyte granulocyte, lymphocyte, coagulation, regulation of hydrogen within concentration of body fluids, fluid
4. distribution and exchange **Digestion:** Control of food and water intake and secretion and absorption movements of the alimentary canal.
5. **Circulation:** Cardio-vascular system, mechanical and electro-physiological activity of the heart, regulation of heart, coronary circulation, haemodynamics, circulation through brain, skin and skeletal muscle.
5. **Excretion:** Renal functions including formation of Urine & Micturition.
6. **Respiration:** Respiratory gases, pulmonary gas exchange, control and mechanics of breathing, hypoxia, asphyxia, dyspnoea, oxygen therapy and resuscitation.
7. **Endocrine System:** Outline of various hormones and their actions, pituitary gland, thyroid, parathyroid, adrenal glands & Gonads.
8. **General Metabolism:** Carbohydrate, Protein & Fat Metabolism
9. Neuron: Properties and functions.
10. Action Potential
11. Special properties of nerve trunks and tracts.

12. Motor units.
13. Reflex physiology
14. Synapse and synaptic transmission.
15. Spinal Control.
16. Cerebellum and basal ganglia.
17. Autonomic nervous system.
18. Somatic sensation.
19. Pain
20. Taste, Olfaction, Auditory and Vision.
21. Neuro physiological psychology

Gross and Microscopic

1. Structure and function of Muscle tissue – skeletal and cardiac.
2. Chemical processes involved in muscle contraction.
3. Physiology of muscle contraction
4. Neuromuscular activity, human movement, physiological mechanism in movement behaviour, strength, endurance, analysis of movement.
5. Circulatory and respiratory response to exercise including effects on the heart blood circulation, body fluid changes, pulmonary ventilation, gas exchange and transport, etc.
6. Effects of exercise and work on other body functions.
7. Metabolic and environmental aspects of exercise and work – metabolism, energy requirement, efficiency of muscular work, nutritional aspects, heat and body temperature regulation & environmental factors.
8. Effects of Exercise training – endurance, fatigue and recovery.
9. Fitness and health – age, sex, body type, race, stress and medical aspects of exercise

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : Twelve per week

Seminars/class discussions

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, practical Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

- 1. To understand the knowledge of basic principles in each system. It aims at understanding the various ways in which the human body functions.**
- 2. The understanding and knowledge about basic physiological functions includes provision of oxygen and nutrients, removal of metabolites and other sensory functions, reproduction and the higher intellectual functions like learning and memory.**
- 3. Description of applied physiology.**

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

- 1.) To make understanding easier about how individual functions of all of the body's different organs and cells are integrated into a functional whole, the human body.**
- 2.) To understand the way separate organs and systems are controlled so that all are coordinated.**
- 3.) To understand the vast network of feedback controls that achieve the necessary balances i.e. Homeostasis.**
- 4.) To emphasize the effectiveness and beauty of the body's homeostasis mechanisms and also to present their abnormal function in disease.**

C. Practical Skills

Students will learn to:

- 1.) Perform various experiments to get a proper understanding of human physiology.**
- 2.) Perform clinical tests e.g. Blood pressure measurement and correlate with text**

D. Transferable Skills :

Students will be able to

- Present physiologic principles in the terminology of molecular and physical science rather than merely as a sense of separate unexplained biological phenomena.

To be as accurate as possible.

To be able to think more creatively.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise) 2.Student Seminars 3. In House Exams		
	50%	After Each Unit
		Every week
	50%	Last Week of September
End of Semester Exam	50%	Last week of November onwards

Teaching Outline:

Unit	Teaching Dates
Blood and body fluids	12 July to 28 July,2019
Muscle physiology	30 July to 31 st August ,2019
Digestive system	1 st September to 22 nd September,2019
Renal physiology	23 rd September to 8 th October,2019
Endocrine system	9 th October to 30 th November,2019
Endocrine system (cont.)	1 December to 5 December ,2019
Cardiovascular system	11 December to 22 December,2019
Cardiovascular system (cont.)	11 January to 31 January, 2020
Cardiovascular system	1 February to 9 February,2020

(cont.)	
Cell	11 February to 13 February,2020
Respiratory System	14 February to 23 February,2020
Genito urinary	25 February to 28 February,2020
Central Nervous System Special Senses	1 March to 15 March,2020
Revision	15 March to 30 March

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

- 1.) Textbook of Medical Physiology- Arthur Gyton (Mosby)
- 2.) Concise, Medical Physiology- SK Chaudhary New Central Agency, Calcutta
- 3.) Textbook of Practical Physiology- Ghai Jaypee

References:

- 1.) Textbook of Physiology- Anand and Manchanda Tata McGraw Hill
- 2.) Human Physiology- Volume 1 and 2, Chatterjee CC, Calcutta, Medical Allied
- 3.) Principles of Anatomy and Physiology, Tortora and Grabowski, Harper Collins

E- Resources

<https://www.meripustak.com>cid-10070/>

<https://www.physiotherapyjournal.com>>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Biochemistry

Programme : BPT (Bachelor of Physiotherapy),(Annual system)

Year: I

Name of the Teacher: Dr Raju Sharma

Availability Timings: 9.00 AM to 3.30 PM

E-mail:dr_sharma13@yahoo.co.in

Objectives of the Course:

UNIT I & II :This course aims at acquainting students with brief review of the different aspects of cellular organelles, their structure and function, also the important bio molecules of nature and human diet, and their physiological applications.

UNIT III & IV : This course aims at acquainting students with different cellular enzymatic activities, hormonal aspect, importance of balanced diet and effect of deficiencies of different vitamins in diet. Students would be taught concept of cellular energetic and metabolism of important bio-molecules

Course Content: The course provides an introduction to-

1. Biophysics (Concepts of pH and buffers), Cell and cell organelles, Water and Electrolyte balance, Connective Tissue, Nerve Tissue (composition and function) and use of isotopes.
2. Carbohydrates, lipids and proteins (classification, sources and their clinical implications)
3. Enzymes (mechanism), Vitamins (sources and deficiencies), Nutrition (balanced diet and importance), Hormones (function and mechanism).
4. Energy production by cell utilizing the bio-molecules as a fuel

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : six per week

Power point presentations

Program Learning Outcomes:

Knowledge and Understanding):

Students will

Know about the functional aspect of cell and its organelles.

Learn about the basics of cellular kinetics

Be acquainted with important bio-molecules of human diet and their physiological implications.

Know about important enzymes , hormones and their function
 Learn about the basics of balance diet and composition.
 Understand the role of vitamins and their deficiency manifestations
 Be acquainted with importance of bio-energetic and metabolism of bio-molecules

B. Intellectual Skills:

Students will be able to
 Understand different cellular organelles their relationship with each other and their role in cellular kinetics.
 Know the importance of water and electrolytes and their role in buffer system of body.
 Understand types of bio-molecules , their sources and their physiological implications
 Learn mechanism of transmission of impulses through nerves
 Understand importance of different enzymes and hormones.
 Know the importance of vitamins and their role in balanced diet.
 Understand how energy is released from different bio-molecules of our diet.
 Learn mechanism of different metabolic pathways.

C. Practical Skills

Students will learn to:
 Differentiate between the different dietary components of our diet and their functional aspect.
 Functional aspect of human cell.
 Understand importance of different Vitamins in our diet and concept of balanced diet.
 Relate the process of energy release from food we eat and how it is utilized for different body functions.

D. Transferable Skills :

Students will be able to
 -relate the chemical aspect of human cell with structural as well as functional aspect of body.
 Understand the concept of nutrition and mechanism of cell metabolism.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal		

Evaluation(CIE)	50%	After Each Unit
1.Class Tests (Unit wise)		
2.Student Seminars	50%	Every week
3 In house Exams		Last week of Sept.
End of Year Exam	50%	Second week of April onwards

Teaching Outline:

Unit	Teaching Dates
I	12 July to 15 Aug.
II	16 Aug to 15 Sept.
	House test
III	5 Nov to 20 Dec.
IV	10 Jan. to 28 Feb.
Revision	Till 15 Mar.

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1. Text book of Biochemistry - Chatterjee M.N.– Jaypee Brothers.
2. Text book of Biochemistry for Medical Students - Vasudevan D.M. - Jaypee Brothers.

References:

1. Clinical Biochemistry – Metabolic & Clinical aspects - Marshall & Bangert – Churchill Livingstone.
2. Biochemistry Southerland – Churchill Livingstone.

E- resources

<http://lookaside.fbsbx.com/file/biochemistry/sport/exercise/metabolism/>

<http://drive.google.com/file/d/14470fCJIMmp2qGHI1CV6XSoHAgeek-b/view?usp=drivesdk/>

http://lookaside.fbsbx.com/file/biochemistry/satanarayana_U_chakrapani/

<http://lookaside.fbsbx.com/file/ATKINS'PHYSICALCHEMISTRY/>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: ELECTROTHERAPY-I

Class: BPT Ist Year

Name of the Teacher: Priyank Sharda

Availability Timings: 9.00 AM to 3.30 PM

Subject: Electrotherapy-1

Objectives of the course

This course aims at acquainting students with the clinical relevance of electrotherapy modalities and use of low and high frequency currents in various conditions. This course will also give knowledge about appropriate clinical doses and technique of application for the use of various electrotherapy modalities. It will prepare students to identify any contraindications and to apply any safety precautions necessary for the treatment to be effective, efficient and safe.

Course Content: This covers the Basics of Electricity, Light and Sound including origin of Electricity, to the use in various experiments in sciences, to the conduction of electricity in nerves and contraction of muscles. It explores faradic type current, TENS, types of TENS, methods of treatment, indications for use, dangers and contraindications. It also covers Infrared therapy, ultraviolet radiation, and other Superficial Heating Modalities with their methods of applications, indications for use, physiological effects, therapeutic effects, dangers.

Detailed Course content: Available at www.gndu.ac.in

TEACHING METHODS

Lectures : Theory 6 per week and Practical 4 per week

Assignments: The students will be asked to write articles on given topics

Powerpoint Presentations

Program Learning Outcomes

KNOWLEDGE AND UNDERSTANDING

The students will

be able to appraise the role of therapeutic modalities in rehabilitation.

Comprehend the indications and contra-indications to electrotherapy modalities.

be able to formulate the most appropriate electrotherapy modality to use in a clinical setting

understand the theory underpinning electrotherapy modalities

be able to describe the basic of Physics which is used in Electrotherapy Modalities and explain the electrical supply of these modalities and understand the working of different devices used in Electrotherapy Modalities like Condenser, Milli ammeter, Voltmeter, Transformer.

PRACTICAL SKILLS

The students will learn to :

locate and stimulate different motor points of muscles region wise, including the upper & lower limb, trunk.

apply different low frequency currents and treat patient using Faradic foot bath, Faradism under pressure and Ionotophoresis.

To plot strength duration curve, interpret it graphically and find Chronaxie and Rheobase.

To apply a hydrocollator pack, region wise for various conditions.

To apply infrared lamp on various regions of the body.

To apply paraffin wax with different methods on various regions of the body.

To assess the test dose of Ultra violet radiations and apply the UVR lamp on various regions of the body.

To apply TENS on various regions of the body.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE)		
1. Class Tests (Unit wise)	50%	After Each Unit
2. In House Exams	50%	Last Week of September
End of Year Exam	50%	April onwards

Teaching Outline

Topics	Teaching Dates
Electrical Supply, Electromagnetic Induction, Transformers, Electromagnetic Spectrum	12 July to 31 August
Effects of Current Electricity, Low frequency currents	1 September to 20 September
	HOUSATEST
Low frequency currents contd. and Physical Principles	15 October to 05 November
Physical Principles	06 November to 30 November
Electrical Reactions and Electrodiagnostic Tests	1 December to 20 December
Infrared Rays, Ultraviolet Rays	11 January to 17 January
Ultraviolet Rays contd. And Superficial Heat	18 January to 28 February
Revision	1 March to 20 March

Attendance policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams

Books Recommended:

1. Electrotherapy Explained: Principles & Practice – Low & Reed – Butterworth Heinemann.
2. Clayton's Electrotherapy, (9th Ed.) Forster & Palastanga Bailliere Tindall.

References

1. Therapeutic Heat and Cold – Lehmann – Williams & Wilkins.
2. Principles and Practice of Electrotherapy – Kahn – Churchill Livingstone.

E-resources :

https://www.physio-pedia.com/Debate_Faradic_or_Galvanic_for_Bell%27s_Palsy%3F
<https://www.elsevier.com/books/electrotherapy-explained/robertson/978-0-7506-8843-7>
[https://www.elsevier.com/books/physical-agents-in-rehabilitation/cameron/978-1-4557-4820-](https://www.elsevier.com/books/physical-agents-in-rehabilitation/cameron/978-1-4557-4820-4)

[4](https://www.elsevier.com/books/physical-agents-in-rehabilitation/cameron/978-1-4557-4820-4)

<http://www.worldcat.org/title/therapeutic-modalities-in-rehabilitation/oclc/156911657>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Anatomy

Programme : BACHELOR OF PHYSIOTHERAPY(BPT) ANNUALLY

Yearly : 1st year

Name of the Teacher: _Dr. Jaswant Kaur

Availability Timings: 9.00 AM to 3.30 PM

E-mail: www.Dr.jaswantphysiotherapyk@gmail.com

Objectives of the Course:

This course aims to teach anatomy to students firstly as a basic science. Then to elaborate as they become familiar with terms used in describing the structure and functions of different regions .it also teaches anatomic abnormalities. The student can understand the functional organization of structures and how they control the various activities of the bodies.

Course Content:

The course provides an introduction to the 1. There will be Twelve Questions of equal Marks distribution. Candidate will have to answer any ten questions.

2. The questions should be equally distributed in the whole syllabus.

Section-I

General Introduction:

1. **Histology**-Cell, tissues of the body, epithelium, connective tissue, cartilage, bone, lymph, muscle, nerve etc.
2. **Osteology**-Formation, function, growth and repair of bones.
3. **General Embryology**-Ovum, spermatozoa's, fertilization, differentiation, development of various systems and foetal circulation.

Section-II

Systems of Human body (a brief Outline):

1. **Blood Vascular System** – Arteries, capillaries, veins, heart, lymphatic system.
2. **Respiratory System** – Anatomy of upper and lower respiratory tract including nose, larynx, trachea, bronchi, pleura and lungs.
3. **Digestive System** – Anatomy of the gastro-intestinal tract.
4. **Urogenital System** – Anatomy of Urinary system, male and female reproductive system.
5. **Endocrine System** – The various organs and production of hormones including definition,

structures in general, control of secretions and role of hypothalamus.

6. Integumentary System

7. Surface Anatomy

Section-III

Neuro-anatomy: Microscopic and gross study of:-

1. Peripheral Nerves
2. Neuromuscular Junction
3. Sensory End Organs
4. Spinal Cord Segments & Areas
5. Brainstem
6. Cerebellum
7. Inferior colliculi
8. Superior Colliculi
9. Diencephalon
10. Hypothalamus
11. Epithalamus
12. Thalamus
13. Cerebral hemispheres
14. Corpus striatum
15. Rhinencephalon
16. Lateral ventricles
17. Meninges
18. Bloody supply of the brain
19. Internal Capsule
20. Visual radiation
21. Auditory radiation
22. Thalamocortical radiations
23. Pyramidal systems
24. Extra-pyramidal systems
25. Sympathetic system
26. Para-sympathetic system
27. Cranial nerves

Section-IV

Upper Extremity

??Osteology

– Outline the anatomical features, attachments, ossification and side determination of the bones of U/L : Clavicle, Scapula, Humerus, Radius, Ulna, Carpals, Metacarpals, Phalanges

??Myology

– Fascia and Muscles of front and back of upper arm : origin, insertion, nerve supply and action.

– Muscles of front and back of forearm : origin, insertion, nerve supply and action.

– Mention the small muscles of hand with their origin, insertion, nerve supply and action.

- Identify the nerves of upper limb and mention their position course, relations and distribution.
- Detail explanation of joints of upper limb : shoulder girdle, Shoulder joint, Elbow, Wrist and joints of hand.
- Indicate the blood vessels of upper limb and mention their position course, relations, distribution and main branches.
- Lymphatic drainage of upper limb
- Applied anatomy of all structures of U/L

Section – V

Regional Anatomy

Detailed explanation of the following with their applied anatomy.

?? Pectoral Region

?? Scapular Region

?? Cubital Fossa

?? Axilla

?? Innervation of Brachial Plexus

?? Spaces of the hand

Section – VI

TRUNK-THORAX ABDOMEN

?? Osteology:

- Vertebral columns: Identify the parts of typical vertebra and state the main features, attachments and ossification.
- Intervertebral disc and mention its part.
- Ribs: Parts and main features of typical rib and define true, false and floating ribs.
- Sternum: State the parts and anatomical features.

?? Myology:

- Fascia and muscles of trunk
- Fascia and muscles connecting U/L with vertebral column: origin, insertion, nerve supply, action.
- Intercostal muscles and diaphragm: origin, insertion, nerve supply and action.
- List layers of anterior Abd wall and mention its origin, insertion, nerve supply and action of these muscles.
- Fascia and muscles of post abd. Wall: origin, insertion, nerve supply and action.

?? Joints of Thorax

Identify the various joints and explain in detail:

- Manubriosternal joint
- Costo vertebral joint
- Costo transverse joint
- Costo Chondral joint
- Chondro sternal joints
- Intervertebral joint
- Movements of vertebral column
- Respiratory movements

??Mention the course and branches and nerves, blood vessels and lymphatic drainage of trunk-thorax-abdomen.

??Lumbar Plexus: Position, formation and branches.

??Rectus sheath: formation and contents.

??Contents of vertebral canal

??Intercostal space and its contents

??Diaphragm-structures passing through it.

??Applied Anatomy of structures of trunk – thorax - abdomen

Section – VII

PELVIS

??Features of pubic symphysis and sacroiliac joints.

??Muscles of pubic floor and mention their attachments, action and nerve supply.

??Difference between male and female pelvis.

??Main features of subdivision, boundaries, walls and floor of pelvis.

??Urogenital diaphragm (outlines only)

– Applied anatomy of plexus

– Lymphatic drainage

– Nerve supply

– Sacral Plexus

– Mention the blood vessels of the region with course, variations, distribution and main branches.

Section – VIII

LOWER EXTREMITY

??**Osteology:**

– Hip bone, femur, Tibia, Fibula, Patella, and bones of the foot

??**Myology:**

– Fascia and muscles in front of thigh: Origin, Insertion, Nerve Supply, Action

– Fascia and muscles of medial side of thigh: Origin, Insertion, Nerve Supply, Action

– Fascia and muscles of back of thigh

– Fascia and muscles of gluteal region

– Fascia and muscles of front of leg and dorsum of foot

– Fascia and muscles of lateral side of leg

– Fascia and muscles of back of leg and sole of foot

– Detailed explanation of joints of Lower Leg: Hip joint, Knee joint, Ankle joint, joints of foot.

– Identify the nerves of Lower Leg and mention their position course, relations distribution

– Indicate the blood vessels of Lower Leg and mention their position course, relation, distribution and main branches

– Lymphatic drainage of Lower Leg

– Explain Femoral triangle and subsartorial canal

– Popliteal fossa

– Anatomy of structures of Lower Leg

Section – IX

Radiological Anatomy: Radiographic appearance of Musculo-skeletal system of Upper limb, Lower limb, Spine.

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : six per week

Seminars/class discussions

Charts

Models

Power point presentations

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, practical Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

1. To gain knowledge about anatomy in an efficient manner.
2. to Study applied anatomy
3. to study relevant diagnostic procedures
4. understanding histology ,osteology and embryology

B. Intellectual (Cognitive/ Analytical) Skills:

- 1.) To emphasize the basic structure in the area being studied so that once mastered ,the student will easily build up his or her knowledge base.
- 2.) To provide basic information to students on gross anatomic Structures.
- 3.) to be able to co relate clinical importance

C. Practical Skills

1. To study bones in detail
2. To study anatomic models of various organs
3. To study surface anatomy

D. Transferable Skills :

Students will be able **To be able to think more creatively.**
students will have basic knowledge of anatomy

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE) 1. Class Tests (Unit wise) 2. Student Seminars 3. In House Exams		
	50%	After Each Unit
		Every week
	50%	Last Week of September
End of Semester Exam	50%	Last week of November onwards

Teaching Outline:

Unit	Teaching Dates
General introduction systems of human body	12 July to 15 August 2019
Neuroanatomy, upper extremity	16 August to 20 September, 2019
Upper extremity, regional anatomy, trunk thorax region.	5 November to 22 December, 2019
Pelvis, lower extremity	10 January to 15 March, 2020
Revision	16 March to 30 March

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1. L. Williams & Warwick, Gray's Anatomy-Churchill Livingstone.
2. Inderbir Singh, Textbook of Anatomy with Colour Atlas–Vol. 1, 2, 3 Jaypee Brothers
3. B.D. Chaurasia, Human Anatomy–Volume 1, 2, 3 CBS Publishers & Distributors.
4. McMinn's Last's Anatomy–Regional and applied, Churchill Livingstone.
5. McMinn's et al–A Colour Atlas of Human Anatomy, Mosby.
6. Cunningham Manual of Practical Anatomy Vol. I, II, III, Churchill Livingstone.
7. Inderbir Singh, A Textbook on Human Neuro Anatomy, Jaypee Brothers.
8. Snell-Clinical Anatomy-Lippincott

References:

5. McMinn's et al–A Colour Atlas of Human Anatomy, Mosby.
6. Cunningham Manual of Practical Anatomy Vol. I, II, III, Churchill Livingstone.
7. Inderbir Singh, A Textbook on Human Neuro Anatomy, Jaypee Brothers.
8. Snell-Clinical Anatomy-Lippincott

E RESOURCE

<https://opentextbc.ca/anatomyandphysiology/>

<https://www.us.elsevierhealth.com/anatomy/physiology/book/>

<https://medicostimes.com/inderbir-singh/>

<https://medicostimes.com/snells-clinical/>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: PROBLEM OF DRUG ABUSE: MANAGEMENT AND PREVENTION

Programme : Bachelors of Physiotherapy (BPT) annually

Yearly : I

Name of the Teacher: Rajbir Kaur Bahia

Availability Timings: 9.00 AM to 3.30 PM

E-mail: rajbirphysio@gmail.com

Objectives of the Course:

The objective of course is to explore Meaning, Nature and Extent of Drug Abuse in India and Punjab. It provides knowledge Consequences of Drug Abuse for individual, family, society and nation. It also explains the Medical Management, Psychiatric Management, and Social Management. It explore the prevention and management of the drug abuse.

Course Content:

The course provides an introduction and overview of drug abuse, characteristics of drugs and their classifications. It explores the environmental and behavioral changes in drug addicted person, consequences of drug use. It also provides knowledge how to do management of drug abuse. It develops new and improved strategies to prevent drug use. It includes medical management having medications for treatment and to reduce the withdrawal effects. It also provides the behavioral and cognitive therapy. It also provides the knowledge of programmers for prevention and cure of drug abuse.

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : three per week

Assignments : The students will be asked to read the textbook in advance and write articles on given topics

PowerPoint Presentations

Test written

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

Understand the Meaning of Nature and Extent of Drug Abuse in India and Punjab and Consequences of Drug Abuse

Understand the management of the Drug Abuse

Understand the Prevention of Drug Abuse

Understand the Controlling Drug Abuse

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

Identify the difference between varieties of drugs.

Know the types of drug abuse.

Think critically regarding the prevention and management of drug abuse.

Provide awareness, seminar, camps regarding drug abuse

The NDPs act, Statutory warnings, Policing of Borders

D. Transferable Skills:

Students will be able to

Communicate with public during seminars.

Work with the de-addiction centers.

Provide counseling, family and group therapy.

Do advertisements on bad effects of drugs, Publicity and media, Campaigns against drug abuse, Educational and awareness program.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise) 2. In House Exams		
	50%	After Each Unit
	50%	Last Week of September
End of Semester Exam	50%	April Onwards

Teaching Outline:

Unit	Teaching Dates
A	12 July to 31Aug
A + B	1 September to 20 September
	House Test
B	15 October to 05 November
C	06 November to 30 November

C + D	1 December to 17 December
D	06 January to 28 February
Revision	1 March to 15 March

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

Problem of Drug Abuse – Sadhana Tandon. Unimax Publication

Drug Abuse: Management and Prevention- Sadhana Tandon. Unimax Publication

References:

Ahuja, Ram (2003), *Social Problems in India*, Rawat Publication, Jaipur.

Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.

Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication

E- resources

<https://www.Shodhganga.inflibnet.ac.in>bitstream>

<https://www.rawatbooks.com>sociology>

www.drugs.ie>resourcesfiles>guides

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Exercise Therapy - I

Programme : Bachelors of Physiotherapy (BPT) annually YEAR: I

Name of the Teacher: Richa Sharma

Availability Timings: 9.00 AM to 3.30 PM

E-mail: richaphysiolkc@gmail.com

Objectives of the Course:

This course offers the use of exercises to promote physical rehabilitation. it also aim at acquainting students about the basic principle of movements and associated physics with it .

This course also aims at aquainting students about the relaxation technique and therapeutic gym.

This section aims at imparting a knowledge about a goniometer which is an instrument that measures range of motion joint angles of the body. This measurement instrument is a helpful, clinical tool that allows for objective measurements in order to accurately track progress in a rehabilitation program.

the course also introduce about the Manual muscle testing procedure that is used for the evaluation of the function and strength of individual muscles .

this course also familiarized about motor learning . Motor learning is when complex processes in the brain occur in response to practice or experience of a certain skill resulting in changes in the central nervous system that allow for production of a new motor skill.

Course Content:

This course provides an introduction to Exercise Therapy, principles and various techniques like passive and active movement, Neuromuscular co-ordination, and suspension therapy.

Course teaches methods of checking muscle strength like MMT, and method to check ROM like Goniometry.

It also tells about, soft tissue manipulation, Motor Learning, Relaxation and therapeutic Gymnasium.

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : six per week

Viva: 2/ Week

Assignments : The students will be asked to read the textbook in advance and write articles on given topics

Powerpoint Presentations

Class tests - written

Program Learning Outcomes:

(Knowledge and Understanding, Analytical Skills, practical Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

know how to describe mechanics of Position-Gravity, Center of Gravity, Line of Gravity, Base of support, Equilibrium, Fixation & Stabilisation.

understand and explain the basic principles of Physics related to mechanics of movement/motion

students will understand and able to describe the deviations with respect to centre of mass, line of gravity & stability, Active movement, Passive movement, Active assisted movement, Resisted movement

know how to describe various factors that contributing to fatigue and tension.

Understand and able to make out that which technique of relaxation is applied in which condition.

Students will understand and explain the various therapeutic equipment for the improvement in muscle strength ,mobility ,endurance, ambulation ,coordination etc

Understand and able to make out normal and abnormal range of motions

Students will make out the strength of different muscles

Students will understand the able to describe the different grading systems.

Analytical Skills:

Students will be able to

To provide an insight of therapeutic exercises.

To make understanding of principles of suspension therapy, MMT, Goniometry.

To help in the understanding the concept of Motor Learning.

To learn about the Relaxation and Therapeutic Gymnasium.

Practical Skills

Students will :

To practice the Active movement ,Passive movement, Active-assisted movement ,Resisted movement

To study the structure & function along with application of various equipment in gymnasium.

Practice the various relaxation technique that helps a person to relax; to attain a state of increased calmness.

To practice all soft tissue manipulative techniques region wise – upper limb, lower limb,neck, back and face.

To practice the grading of muscle strength and measure range of motion region wise – upper limb, lower limb and trunk.

Transferable Skills :

Students will be able to:

Assess the range of motion of various joints of the body.

Assess the muscle strength of various muscle groups.

Modes of Assessment	Minimum Score Required (to	Schedule
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	Qualify for the Next Exam/Class)	
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise) Student Seminars In House Exams	50%	After Each Unit
		Every week
	50%	Last Week of September
End of Yearly Exam	50%	Last week of April onwards

Teaching Outline:

Unit	Teaching Dates
I	12 July to 15 Aug
II	16 Aug to 20 September
	House Test
III	5 November to 20 December
IV	10 January to 28 February
Revision	Till 15 march

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1 . Dena Gardiner. Principles Of Exercise Therapy.

Practical Exercise Therapy- Hollis – Blackwell Scientific Publications.

Muscle testing and functions – Kendall – Williams & Wilkins.

Daniels and Worthinghams – Muscle Testing- W.B. Saunders.

References:

DELORME and WATKINS, *Progressive Resistance Exercises*, 1951

FRENKEL, *Treatment of Tabetic Ataxia*, Rebman, 1902

GRIEVE, G.P., *Mobilisation of Spine*, 3rd edn, Churchill Livingstone, 1979.

E- Resources

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3169254/>

<https://www.researchgate.net/publication>

www.scribd.com/document/111111111

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Sociology & Community Health

Programme : Bachelors of Physiotherapy (BPT) annually

Yearly : I

Name of the Teacher: Rajbir Kaur Bahia

Availability Timings: 9.00 AM to 3.30 PM

E-mail: rajbirphysio@gmail.com

Objectives of the Course:

The objective of course is to explore the impact of culture on health, behavior, beliefs and practices of individuals and groups. Basic concepts of this subject are to understand the beliefs and values of society. Health professionals need to understand the relationship between social determinants and health. Meaning of social control. Provide knowledge of Social security and social legislation in relation to the disabled. Consequences of the social problems and its remedies to prevent social problems.

Course Content:

The course provides an introduction to Definitions of sociology, sociology as a science of society, uses of the study of sociology, application of knowledge of sociology in physiotherapy and occupational therapy. Social factors affecting health status, decision making in taking treatment. Institutions of health, their role in the improvement of the health of the people.

Meaning of socialization, influence of social factor on personality, socialization in hospitals, socialization in the rehabilitation of patients. Concept of social groups, the role of primary groups and secondary groups in the hospitals and rehabilitation settings, discussion of changes in the functions of a family, Concept of Community, Components of culture, Features of modern caste system and its trends Meaning of social change, factors of social change.

the role of norms, folkways, customs, morals, religion, law and other means of social control in the regulation of human behavior, social deviance and disease. Consequences of the following social problems in relation to sickness and disability, remedies to prevent these problems: like Population explosion, Poverty and unemployment, Beggary, Juvenile delinquency, Prostitution, Alcoholism, Problems of women in employment. Introduction to Community Health, Community and

rehabilitation. Community based rehabilitation vs. institutional based rehabilitation – comparison and different aspects. Community resources and their uses

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : three per week

Assignments : The students will be asked to read the textbook in advance and write articles on given topics

PowerPoint Presentations

Test Written

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

know application of knowledge of sociology in physiotherapy and occupational therapy.

understand the role Institutions of health in the improvement of the health of the people.

Students will understand and be able influence of family on the individual's health.

Student will able to understand the role of Community in determining beliefs, practices and home remedies in treatment. Understand the Meaning of social control, social control in the regulation of human behavior

Understand the Social security and social legislation in relation to the disabled.

Understand the role of medical social worker.

Understand the Community based rehabilitation in relation to different medical and surgical conditions e.g. Cholera, Typhoid, Diphtheria, Leprosy, Poliomyelitis, HIV & AIDS, and Hepatitis etc. Prevention of diseases at different levels.

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

uses the study of sociology

know decision making in taking treatment.

Know the role of primary groups and secondary groups in the hospitals and rehabilitation settings.

Impact of culture on human behavior, cultural meaning of sickness, response & choice of treatment.

Know the human adaption and social change, social change and stress, social change and deviance, social change and health programmes.

Know the role of norms, folkways, customs, morals, religion, law

Know how to prevent the various social problems.

Know the difference between the Community based rehabilitation and institutional based rehabilitation

D. Transferable Skills :

Students will be able to

Understand what is ethically right and ethically wrong.

To collaborate better and strategically use of their potential in the clinical practice.

Understand the role of primary groups and secondary groups in the rehabilitation settings.

Understand what is ethically right and ethically wrong.

Understand how to prevent the diseases at different levels.

Understand the role Community based rehabilitation and institutional based rehabilitation

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise)		
	50%	After Each Unit
	50%	Last Week of September
End of Semester Exam	50%	April onwards

Teaching Outline:

Unit	Teaching Dates
A	12 July to 31Aug
A + B	1 September to 20 September
	House Test
B	15 October to 05 November
C	06 November to 30 November
C + D	1 December to 17 December
D	06 January to 28 February
Revision	1 March to 15 March

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

Textbook of Sociology for Physiotherapy Students – KP Neeraja

Sociology for Physiotherapists – Purnima Khanna

Physiotherapy in community Health and Rehabilitation – Waqar Naqvi

Park's textbook of preventive and Social Medicine 22nd edition. K Park. M/S
Banarsidas Bhanot Publishers

References:

Basavanthappa BT: *Textbook of Community Health Nursing*. Jaypee Brothers Medical Publishers (P) Ltd.:New Delhi.66-70,1999.

Harish: *Economic Development and Role of Indian Women*. Common Wealth Publication: New Delhi, 1996.

Kasthuri Sundar Rao: *An Introduction to Community Health Nursing*. BI Publication Pvt Ltd.: Chennai 337-346,2000.

Acharya, A.K.(n.d.).*Impact of Cultural and Religious Practices of Prostitution on the Trafficking of Women in India*.

Ahuja Ram (2014).*Social problems in India* .Jaipur : Rawat Publications.

Conrad &Schneider(1992). *Deviance and Medicalization. From Baldness to Sickness*.U.S.:Temple University Press.

E- resources

<https://www.researchgate.net>publication>

www.trayectorias.uanl.mx/33y34/pdf/5_arun.pdf

[www.ssoar.info/ssoar/.../ssoar-2014-langmann-NGOs and Poverty Reduction in.pdf](http://www.ssoar.info/ssoar/.../ssoar-2014-langmann-NGOs_and_Poverty_Reduction_in.pdf)

https://halasocialdeviance.files.wordpress.com/.../peter_conrad_joseph_w_schneider

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Biomechanics

Programme : BPT (Bachelor of Physiotherapy),(Annual system)

Year: I

Name of the Teacher: Dr Raju Sharma

Availability Timings: 9.00 AM to 3.30 PM

E-mail:dr_sharma13@yahoo.co.in

Objectives of the Course:

UNIT I & II: This course aims at introducing students with biomechanics, its importance to physiotherapy students and basics of this branch. Students would also learn the joint structure, design and biomechanical aspect of different joints of body.

UNIT III & IV: This course aims at introducing students with basic structure of muscle, its components and different types of muscle work. Students would also learn about posture, ideal posture and different postural deviations. Students would be introduced about the biomechanical aspect of human locomotion and common locomotion abnormalities.

Course Content: The course provides an introduction to-
Mechanics and its principles.

Force systems and applications.

Gravity and its implications on human body.

Joint structure and its design.

Biomechanical aspect of different joints.

Elements of muscle structure and different muscle properties.

Muscle work and factors affecting it.

Posture, its maintenance and biomechanical aspect of it.

Different presentation of bad postures and causes.

Concept of normal human locomotion.

Biomechanical analysis of human locomotion (Gait)

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : six per week

Power point presentations

Seminar

Assignments : The students will be asked to read the textbook in advance and write articles on given topics

Participatory and Experiential Learning

Program Learning Outcomes:

Knowledge and Understanding):

Students will

Know about different terms related to Biomechanics.

Recapitulate the concept of mechanics and related principles.

Understand the concept of gravitational force and its effect on the human motion.

Know the kinematic and kinetic analysis of the different joints of our body with respect to their structure and design.

Learn to relate the muscle structure and its function

Understand the concept of ideal posture and factors responsible for it.

Know different types of postural problems

Understand the analytical aspect of normal human locomotion and its abnormalities

B. Intellectual Skills:

Students will be able to

Understand different Newton’s laws of Motion and their applications in relation to biomechanics.

Know the importance of kinematics and kinetics in motion analysis.

Understand the concept of joint design and movement available at the joint.

Rationalize the concepts of human posture and related problems.

Understand normal locomotion and its clinical aspects

C. Practical Skills

Students will learn to:

Study the effects of forces on objects.

Find out the C.G. of an object and to relate the concept of gravity with motion and stability.

Identify axis and planes of motion at the different joints of body and to relate Joint architecture and type of movement available.

Study the different types of muscle contraction and muscle work

Analysis of Normal posture respect to L.O.G. and the optimal position of joints in Antero - posterior and lateral views.

Analysis of normal gait and measurement of spatio temporal features.

D. Transferable Skills :

Students will be able to

-relate mechanics and structural aspect of human joint and muscles. Also the posture, its mechanism, locomotion and its variables

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal		

Evaluation(CIE)	50%	After Each Unit
1.Class Tests (Unit wise)		
2.Student Seminars	50%	Every week
3 In house Exams		Last week of Sept.
End of Year Exam	50%	Second week of April onwards

Teaching Outline:

Unit	Teaching Dates
I	12 July to 15 Aug.
II	16 Aug to 20 Sept.
	House test
III	5 Nov to 20 Dec.
IV	10Jan to 28 Feb.
Revision	Till 15 March.

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1. Joint Structure and Function – A Comprehensive Analysis - Norkins & Levangie - F.A. Davis.
2. Basic Biomechanics Explained - Low & Reed - Butterworth Heinmann.

References:

1. The Physiology of the Joints – Volume – 1 – Kapandji IA – 5th Edition, Churchill Living Stone.
2. The Physiology of the Joints – Volume – 2 – Kapandji IA – 5th Edition, Churchill Living Stone.
3. The Physiology of the Joints – Volume – 3 – Kapandji IA – 5th Edition, Churchill Living Stone
4. Brunnstrom’s Clinical Kinesiology - Smith et al - F.A. Davis.
5. Basic Biomechanics Explained - Low & Reed - Butterworth Heinmann.
6. Kinesiology: Applied to Pathological Motion - Soderberg Lippincott

E- resources

<https://youtu.be/lu6dICX7q9c/>

<https://youtu.be/QAnEhz6Egn4/>

<https://youtu.be/PZBiv0uSXVg/>

<https://youtu.be/R2XlUt5wA20/>

<https://youtu.be/Zp5iC3loq7u/>

CURRICULUM PLANNING AND IMPLEMENTATION

Paper: Pathology and Microbiology

Class: BPT 2nd Year Session: 2018-2019

Name of the Teacher: Dr Jaswant Kaur

Availability Timing: 9.00am to 3.30pm

Objective of the course

The Objectives are to provide a balanced accumulate and up to date view of the central body of Pathology and Microbiology.

Content

Pathology:

To study various topics in general Pathology to provide students an upright into the pathological causes of disease.
To discuss various diseases of heart, lungs, bones and muscles.

Microbiology:

To provide the student an upright on history of microbiology and sterilization control also outline of diseases is to be discussed.

To study outline of various diseases with respect to the causative organism, mode of transmission, pathogenesis, prevention and diagnostic tests.

Course content

Section – I

Pathology (Part 1) General Pathology

1. Aims and objectives of the study of pathology. Meaning of terms, etiology, pathogenesis

And lesions.

2. Causes of disease .cell injury – causes of cell injury features of cell injury mechanism of cell injury – hypoxia, free radical injury. Necrosis and gangrene

3. Inflammation–definition, events of acute inflammation, chemical mediator of

Inflammation, morphological types of acute inflammation, chronic inflammation,
difference between acute and chronic inflammation

4. REPAIR– Primary healing, secondary healing, factors affecting healing and repair healing
of skin, muscle and bone.

5. Fluid and hemodynamic derangements–oedema, hyperaemia, Haemorrhage, shock,
embolism, thrombosis, infarction

6. Immunity–natural and acquired. Immunological mechanisms of tissue injury,
Hypersensitivity reactions, general features of autoimmune diseases and
Immunodeficiency diseases.

7. Neoplasia: characteristic of benign and malignant tumours, grading and staging of
Malignant tumours, a brief outline of the carcinogenic agents and methods of diagnosis of
malignancy and general effects of malignancy on the host

8. Nutritional Disorders: deficiency disorders (protein deficiency, vitamin deficiency
(A, B, C, D, E,) causes, features, a brief outline of the methods of diagnosis (details not
required).

Part 2

Systemic pathology: a brief outline of etiology, pathogenesis and general features of disease of
the following systems. (The morphology, microscopic details and details of diagnostic
procedures are not required).

1. Blood: disorders of RBC, WBC, platelets

2. Blood Vessels: atherosclerosis, thromboangitis obliterance, varicose vein, DVT,

Thrombophlebitis, Lymphoedema. Disease of heart: congestive cardiac failure, ischemic heart disease, rheumatic heart
disease, infective heart disease (pericarditis, myocarditis, endocarditis)

4. Respiratory System: Pneumonias, Bronchiectasis, Emphysema, Chronic bronchitis,
Asthma, Tuberculosis.

5. Joints disorders: Arthritis- types and their features.

6. Bone Disorders: osteoporosis, Paget's disease, osteogenesis imperfecta, Osteomyelitis, tumours–Osteosarcoma,
Chondrosarcoma, Erwings Sarcoma, multiple myeloma (a brief outline)

7. Muscles: Muscular dystrophy, Myasthenia Gravis.

8. Nervous System: meningitis, encephalitis, vascular diseases of brain, poliomyelitis, nerve

Injuries

Section – II

Part–I Microbiology

1. An introduction to microbiology, Classification of microorganisms,
2. Infection – types, source, portals of entry, spread.
3. Prevention and control of infection, Disinfection and antiseptics Sterilization

Part–II

An outline of the following infectious diseases with respect to the causative organism, mode of transmission, pathogenesis, prevention, and diagnostic tests (details of the execution and interpretation of the tests not required)

Chicken Pox, Measles, Mumps, Influenza, Diphtheria, Whooping Cough, Tetanus, Tuberculosis,

Leprosy, Rubella, Cholera, Gastroenteritis, Food Poisoning, Hepatitis, AIDS, Typhoid, Rabies,STD, Ameobiasis, Kalaazar, Malaria, Filaria.

Teaching Methodology

Lectures 12 per week
Power Point Presentation
Quiz
Videos News articles

Programme Learning Outcomes

- 1) Knowledge and Understanding
- 2) Intellectual skills
- 3) Transferable skills

Knowledge and understanding

It involves investigation of the causes (etiology) of disease as well as pathogenesis.
To study various changes that leads to signs and symptoms of the patient.
To render diagnosis and guide therapy.

Intellectual (Cognitive/Analytical) skills

To making understanding easier about how diseases begin.

To understand the fundamental cellular and tissues responses to pathologic stimuli.
To understand bacteria, viruses and protozoa.

Transferable skills

To think clearly about how diseases begin.
To be able to think more creatively.
To gain knowledge about diagnostic procedure.

Modes of assessment:

Class test: after every unit

In House exam: last week of September

Annual exam: May 2020

TEACHING OUTLINE

PATHOLOGY

JULY 2019- Aims and Objective of Pathology

Cell Injury

Inflammation

AUGUST 2019 - Inflammation (Cont.)

Repair

SEPTEMBER 2019 – Neoplasia

OCTOBER 2019 – Blood disorders

NOVEMBER 2019 – Blood Vessels

DECEMBER 2019 – Diseases of Heart

JANUARY 2020 – Respiratory System

Nutritional Disorders

FEBRUARY 2020 – Bone Disorders

Muscle Disorders

MARCH 2020 – Nervous System

MICROBIOLOGY

JULY 2019- An introduction to micro-organisms and infection

AUGUST 2019 – Sterilization and Disinfection

SEPTEMBER 2019 – Chicken pox

Measles

Mumps

Influenza

OCTOBER 2019 – Diphtheria

Whooping Cough

Tetanus

Tuberculosis

NOVEMBER 2019 – Leprosy

Rubella

Cholera

Gastroenteritis

Food Poisoning

DECEMBER 2019 – Hepatitis

AIDS

Typhoid

Rabies

JANUARY 2020 – STD

FEBRUARY 2020 – Kala-Azar

Filaria

MARCH 2020 – Ameobiasis

Malaria

TEXTBOOKS-

Textbook of Pathology- Harsh Mohan

Textbook of Microbiology- Ananthanarayan and Paniker's

REFERENCES-

Boyd's Pathology

Govan's Illustrated Pathology

Paniker's Textbook of Medical Parasitology

E- REFERENCE- <https://accessmedicine.mhmedical.com>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Pharmacology

Programme : Bachelor of Physiotherapy

Yearly : IIInd Year

Name of the Teacher: Dr Jaswant Kaur

Availability Timings: 9.00 AM to 3.30 PM

E-mail: : drjaswantphysiotherapyk@gmail.com

Objectives of the Course:

This course aims to acquaint the student about the basic and applied nature of Pharmacology. It also tells them various aspects like General Pharmacologic Principles. Drugs acting on various systems, chemotherapy and vitamins.

Course Content:

Section – I

1. General action of drugs.
2. Drug allergy and idiosyncrasy.
3. Drug toxicity
4. Metabolic fate of drug
5. Methods of administration
6. Chemical character of drugs
7. Drugs acting on respiratory system
8. Vitamins

Section – II

1. Drugs acting on Central nervous system – anaesthetics, alcohols, alkaloids, narcotics, antipyretics, hypnotics, sedatives, anticonvulsants, stimulants, psychotherapeutics.
2. Drugs acting on peripheral nervous system – stimulating and inhibiting cholinergic and anticholinergic activity.
3. Drugs acting on Neuromuscular junction and muscles
4. Drugs for pain management.

Section – III

1. Hormones and drugs affecting endocrine functions
2. Drugs acting on cardiovascular system

3. Chemotherapeutic agents

Detailed Course Contents: Available at www.gndu.ac.in

Teaching methods:

6 lectures/week

Class discussions

Powerpoint Presentations

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

To understand Pharmacology as a basic and applied source

To delineate the essential information about drugs.

To provide a concise and up to date information source to prescribers.

B. Intellectual(Cognitive/ Analytical) Skills:

To make the student learn the unique synthesis of basic pharmacology with clinical pharmacology and pharmacotherapeutics

To understand the pharmacological developments and their impact on different treatment modalities

To amalgamate the developments with the core content of the subject

To understand risk-benefit ratio of drugs

D. Transferable Skills :

- To remove doubts about pharmacology as a subject

- To make understanding easier

- To keep students in touch with developments in drug

- To create interest in pharmacology as a subject

Modes of Assessment	Minimum Score Required (to Qualify for the	Schedule
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	Next Exam/Class)	
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise) 2.Student Seminars 3. In House Exams	50%	After Each Unit
		Every week
	50%	Last Week of September
End of Semester Exam	50%	Second week of April onwards

Teaching Outline:

Unit	Teaching Dates
General Pharmacology	12 July to 31 July 2019
General Pharmacology	1 August to 31 August 2019
Drugs acting on CNS	1 September to 30 September 2019
Drugs acting on CNS	1 October to 31 October 2019
Drugs acting on Peripheral nervous system	1 November to 31 November 2019
Drugs acting on Neuromuscular junction and muscles Drugs for pain management	1 December to 22 December 2019
Drugs acting on Cardiovascular system	11 January to 31 January 2020
Hormones and drugs affecting endocrine functions	1 February to 28 February 2020
Chemotherapeutic agents	1 March to 15 March 2020
Revision	16 March to 30 March 2020

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1. Pharmacology and Pharmacotherapeutics - R.S. Satoskar – Popular Publications, Bombay.
2. The Pharmacologic Principles of Medical Practice - Krantg & Jelleff - Calcutta Scientific Book Agency.
3. Pharmacology - Praseem K. Das. – Churchill Livingstone
4. Essential of Medical Pharmacology - K.D. Tripathi - Jaypee Brothers.

References:

Pharmacology - Katzung

Pharmacology - Goodman and Gillman

E- resources

<https://www.elsevier.com>books>reznik>

<https://pharmacyfunblog.files.wordpress>

<https://www.pdfdrive.com>esentials-of-medicals-pharmacology>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Electrotherapy – II

Programme : Bachelors of Physiotherapy (BPT) annually

Yearly :II

Name of the Teacher: Rajbir Kaur Bahia

Availability Timings: 9.00 AM to 3.30 PM

E-mail: rajbirphysio@gmail.com

Objectives of the Course:

The objective of course is to have a Review of Neuro – muscular Physiology including effects of electrical stimulation. Describe the Physiological effects, Therapeutic uses, Indications & Contraindications of various Low, Medium & High Frequency currents. Describe the Physiological effects & therapeutic uses of various therapeutic ions & topical pharmaco-therapeutic agents to be used for the application of Phonophoresis. Learn the different modes of application of electrotherapy according to purpose for treatment. Student will able to know how electrical energy use in the treatment of injury, relief of pain or therapeutic application to stimulate the tissue healing and restore the function.

Course Content:

The course provides introduction Physiological responses to heat gain or loss on various tissues of the body. Therapeutic effects of heat, cold and electrical currents. Physical principles of Electro – magnetic radiation. Physics of sound including characteristics and propagation. It provide knowledge of Production, biophysical effects, types therapeutic effects, techniques of application, indications, contraindications, precautions, operational skills and patient preparation of both High and Medium frequency currents. It gives Definition, historical background, physical principles, biophysical effects, types, production, therapeutic effects, techniques of application, indications, contraindications, precautions, operational skills and patient preparation of Therapeutic cold, mechanical pressure and Therapeutic light in Physiotherapy. Further, it also contains an information of Instrumentation, definition & basic techniques of E.M.G., E.N.G. and An introduction of Biofeedback mechanism, its Contraindications , indication, precautions Biofeedback Mechanism .

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : six per week

Student Seminars: one per week

Assignments : The students will be asked to read the textbook in advance and write articles on given topics

PowerPoint Presentations

Practical

Test written

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, practical Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

Able to know the production, physiological and therapeutic effect of various modalities techniques of application, indications, contraindications, precautions, operational skills and patient preparation. like IFT, LASER.

Able to understand the basic physics and various electrical currents (Medium / High frequency currents)

Able to know the different therapeutic and physiological effect of cold and heat therapy.

Able to describe the contraindication, precaution of different modalities according to the different conditions.

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

Able to communicate with patient regarding application of different modalities.

To making understand how to apply the modalities in different conditions with whole precaution and contraindication.

Able to think critically to modify the treatment according to their better results.

Know the definition & basic techniques of E.M.G. and E.N.G.

Know the Instrumentation, principles, therapeutic effects, indications, contraindications, limitations, precautions, operational skills and patient preparation of all modalities.

Practical Skills

Student will learn to :

Study a short wave diathermy unit and Micro wave diathermy unit, its operation and different methods of application –region wise.

Study an Ultrasound unit and a Laser unit, its operation and different methods of application – region wise.

Study various forms of therapeutic cold application region wise including – ice, cold packs, vapour coolant sprays, etc

Study a Intermittent therapy unit and Interferential pneumatic therapy unit its operation and different methods of application –region wise.

Observe various Electro – myography (EMG) and Electro – neurography (ENG) procedures

Study a Bio feedback unit, its operation and different methods of application – region wise.

D. Transferable Skills:

Students will be able to

Be as accurate as possible duration treatment sessions.

Think more creatively.

Explain whole treatment procedure to the patient easily.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise) 2.Student Seminars 3. In House Exams		
	50%	After Each Unit
	50%	September Onwards
		Last Week of September

End of Semester Exam	50%	April onwards
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Teaching Outline:

Unit	Teaching Dates
B	12 July to 31Aug
B+ A	1 September to 20 September
	House Test
A	15 October to 05 November
C	06 November to 30 November
C + D	1 December to 17 December
D	06 January to 28 February
Revision	1 March to 15 March

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

Electrotherapy Explained: Principles & Practice Low & Reed – Butterworth Heinmann

Clayton’s Electrotherapy Theory and Practice (8th Edition) – Forster & Palastanga

Textbook of Electrotherapy – Jagmohan Singh

Physical agents in rehabilitation, from research to practice, fourth edition- Michelle H. Cameron.

References:

American Physical Therapy Association: *Guide to physical therapist practice*, ed 2, Alexandria, VA, 2001, The Association.

Weston M, Taber C, Casgranda L, et al: Changes in local blood volume during cold gel pack application to traumatized ankles, *J Orthop Sport Phys Ther* 19:197-199, 1994.

Hitchcock RT, Patterson RM: *Radio-frequency and ELF electromagnetic energies: a handbook for health professionals*, New York, 1995, Van Nostrand Reinhold.

Pye SD, Milford C: The performance of ultrasound physiotherapy machines in Lothian Region, Scotland, 1992, *Ultrasound Med Biol* 20:347-359, 1994.

Hawkins D, Houreld N, Abrahamse H: Low level laser therapy (LLLT) as an effective therapeutic modality for delayed wound healing, *Ann NY Acad Sci* 1056:486-493, 2005

E- resources

[www.electrotherapy.org>downloads](http://www.electrotherapy.org/downloads)

[https://faculty.psau.edu.sa>filedownload](https://faculty.psau.edu.sa/filedownload)

[https://books.google.com>books>about](https://books.google.com/books/about)

[https://www.scribd.com>document>textbook](https://www.scribd.com/document/textbook)

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Exercise Therapy - II

Programme : Bachelor of physiotherapy (BPT) ANNUALLY

YEARLY :I

Name of the Teacher: Komaldeep Kaur

Availability Timings: 9.00 AM to 3.30 PM

E-mail: dr.komaldeep@gmail.com

Unit -1

Objectives : Describe and demonstrate principles, indications and application of techniques such as Traction, breathing exercises, group therapy, yoga etc

Describe the skill & significance of Group & Recreational Exercises & their Advantages & Disadvantages

Be able to describe Principles of Yoga, its types, its physiological & psychosomatic effects & demonstrate standard yoga postures used by the beginners

Learning outcome

Knowledge and understanding :

students will

know how to describe Principles of traction physiological & therapeutic effects classification types indications contraindications techniques of application operational skill & precautions.

Students will understand and explain the various Review normal breathing mechanism, types, techniques, indication, contraindications, Therapeutic effects & precautions of breathing exercise. Group theory -types, advantages & disadvantages.

Be able to describe Principles of Yoga, its types, its physiological & psychosomatic effects & demonstrate standard yoga postures used by the beginners

B. Practical Skill

students will learn to:

To study the structure & function along with application of various equipment in gymnasium.

Practice the various relaxation technique that helps a person to relax; to attain a state of increased calmness; or otherwise reduce levels of pain, anxiety and stress.

Unit -2

Objective-; Functional re-education techniques

are those techniques which are used in re-education of lost functions. Restoration of function is important in achieving the patient's rehabilitation. Re-education of function requires the co-

operation of all who come in contact with him. Joint mobilization is a manual therapy intervention, a type of passive movement of a skeletal joint. It is usually aimed at a 'target' synovial joint with the aim of achieving a therapeutic effect. When applied to the spine, it is known as spinal mobilization

Course content the course of this section introducing about group therapy, Neuromuscular Inco-ordination – Review normal neuromuscular coordination, Etiogenesis of neuromuscular in co-ordination & general therapeutic techniques, effects, indications, contraindications & precautions. Functional re-education – General therapeutic techniques to re-educate ADL function.

Learning Outcomes

A.Knowledge and understanding-;

Students will make out the strength of different muscles

Students will understand the able to describe the different neuromuscular conditions .

Practical skill

To assess & evaluate ADL's and practice various training techniques.

To study & practice mat exercises.

To study & practice the various techniques of mobilization of joints region wise.

Unit -3

Objective- this section aims at acquainting students about the Hydrotherapy:

1. Basic principles of fluid mechanics, as they relate to hydrotherapy.
2. Physiological & therapeutic effects of hydrotherapy, including joint mobility muscle Strengthening & wound care etc.
3. Types of Hydrotherapy equipment, indications, contraindications, operation skills & patient preparation

Course content

Hydrotherapy

Principles (Hydrodynamics), Description of the Tank, Application, Effects, Indications& Contraindications, methods & effects/ uses,Special techniques in water, equipment.

Unit -4

Objective-

This course offers the use of exercises to promote awareness about normal posture and poor posture. It also aims at acquainting students about the basic principle of Gait and associated biomechanics with it.

Course content-

Posture, Balance, Gait:

Normal Posture – Overview of the mechanism of normal posture.

Abnormal Posture – Assessment, Types, etiology, management, including therapeutic exercises.

Static and Dynamic Balance – Assessment & management including therapeutic exercises.

Gait – Overview of normal gait & its components.

Gait deviations - Assessment, Types, etiology, management, including therapeutic exercises.

Types of walking aids, indications, effects & various training techniques

Learning Outcome

Knowledge and understanding :

Comprehend the normal disposition, inter-relationships, gross, functional and applied anatomy of the musculoskeletal system, locomotion, posture, gait and various organs in the body.

Normal Posture, Methods of Assessment of the Posture-Sitting /standing/ Lying, Physiological deviations of the posture, postural mechanism, correction of poor posture

Gait

a) Biomechanics of normal gait energy requirement, kinetics and kinematics of the trunk and upper extremity during gait, stair and running gait, abnormal gait

Methods of assessment of Gait (distance and time variables)

b) Walking Aids like axillary /elbow crutches, walking sticks, Tripod, Walker - Measurement, Pre-crutch training, Types of crutch gaits

B. Practical Skill

students will learn to

To study & practice the use of various ambulation aids in gait training..

To assess & evaluate normal & abnormal posture & practice various corrective techniques.

To assess Gait deviations

Types of walking aids, indications, effects & various training techniques.

Unit -5

Objective-This section aims at imparting a knowledge about a Proprioceptive Neuromuscular Facilitation (PNF) is a more advanced form of flexibility training that involves both a stretch and a contraction of the muscle group being targeted. PNF stretching was originally developed as a form of rehabilitation, and to that effect it is very effective

Course content

Conceptual framework, principle of proprioceptive neuromuscular facilitation (PNF)

techniques, including indications, therapeutic effects and precautions.

Learning Outcomes:

A. Knowledge and understanding:

students will know how to use various techniques of PNF ,Understand and able to make out normal and abnormal range of motions

Students will understand and be able to describe the **PNF** is an advanced form of stretching that allows you to target a specific muscle group and stretch it as well as strengthen it

Unit -6

ObjectiveRole of muscle energy technique is a manual therapy that uses the gentle **muscle** contractions of the patient to relax and lengthen **muscles** and normalize joint motion.

Course content

Muscle energy technique

Acquire the skill of application of various MET techniques& Describe Principles, Physiological effects, Therapeutic use, Merits &Demerits..

Preparation of Patient; Effects , Uses, Indications and Contraindications of the above manipulation.

Learning Outcomes

A.Knowledge and understanding-;

Students will know about the various METtechnique

Understand and explain the basic concept of MET associated with physiological effect, therapeutic effect.

Students will able to make out in which condition MET can be given and in which condition it is contraindicated.

B.Practical skill

To practice all MET techniques region wise – upper limb, lower limb,neck, back and face.

D. Transferable Skills :

Students will be able to

- D. Transferable Skills:

Students will be able to

Learn how to command the patient during his/her treatment sessions.

Demonstrate the exercises, home advice, ergonomics advice to the patient.

Use patient language during treatment for patient comfort.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise) 3. In House Exams	50%	After Each Unit
	50%	Second week of April onwards

Teaching Outline:

Unit	Teaching Dates
I	12 July to 31 August
II	1 september to 20 September
	House test
III	15 october to 05 november
IV	06 november 30 november
V	1 december to 17 december
VI	05 JANUARY TO 28 JANUARY
REVISION	1 MARCH TO 20 MARCH

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

- 1) Practical Exercise Therapy - Hollis - Blackwell Scientific Publications.
- 2) Therapeutic Exercises - Basmajian - Williams & Wilkins.
- 3) Therapeutic Exercises Foundations and Techniques - Kisner & Colby - F.A. Davis.
- 4) Proprioceptive Neuromuscular Facilitation - Voss et al - Williams and Wilkins.

- 5) Principle of Exercise Therapy - Gardiner - C.B.S. Delhi.
- 6) Orthopaedic Physical Therapy - Woods - Churchill Livingstone.
- 7) Manipulation and Mobilization Extremities and Spinal Techniques - Edmond - Mosby.
- 8) Aquatic Exercise Therapy - Bates and Hanson-W.B. Saunders.
- 9) Manual Examination and Treatment of Spine and Extremities - Wadsworth - Lippincott.
- 10) Hydrotherapy: Principles and Practices - Campion - Butterworth Hei

References:

Chaitow L, Crenshaw K. Muscle energy technique. Elsevier Health Sciences; 2006

Alan Davis, slideplayer.com

E- resources

<http://slideplayer.com/slide/4638093/>

<https://leggehealth.ca/portfolio-item/muscle-energy-technique-met/>

<http://book.ly/buysearch/therapeutic%20exercises/>

<http://book.ly/buysearch/proprioceptive%20neuromuscular%20facilitation/>

<http://slideplayer.com/slide/4638093/>

<https://leggehealth.ca/portfolio-item/muscle-energy-technique-met/>

<http://book.ly/buysearch/therapeutic%20exercises/>

CURRICULUM PLANNING AND IMPLEMENTATION
Course Name: PSYCHOLOGY

Programme : BPT (Bachelor of Physiotherapy)

Year: II year

Name of the Teacher: Dr. Shaifali Taneja

Objectives of the Course:

This course aims at acquainting students about meaning and basic concepts involved in psychology, development of human behavior and psychological needs of human beings. Also concept of health psychology and its applications in clinical settings.

Detailed Course Contents: Available at www.gndu.ac.in

Program Learning Outcomes:

Knowledge and Understanding:

Students will learn

1. Basics of psychology and human behavior.
2. Different components of human psychology.
3. Basics of health psychology.
4. Applied part of health psychology in clinical psychology.

B. Intellectual skills:

Students will understand

1. Mechanism of human behavior and its different states.
2. Importance of effective communication with patients.
3. Application of psychological concepts in patient treatment.

C. Practical skills:

1. Students will learn effective understanding of human behavior and communication.
2. Effective handling of patients and their emotional states.

D. Transferable Skills:

Students will be able to

Transfer his knowledge about human behavior into their language and clinical areas more effectively

Text Book(s):

1. Introduction to Psychology - Mums - I.D.P. Co.
2. Foundation of Psychology - Weld - Publishing House, Bombay.
3. Introduction to Social Psychology – Akolkar – Oxford Publishing House.
4. Psychology and Sociology – Applied to Medicine – Porter & Alder - W.B. Saunders.
5. Behavioural Sciences for Medical Undergraduates – Manju Mehta - Jaypee Brothers.
6. Elementary Psychology - Mohsin - Moti Lal Banarsi Dass, Delhi.

References:

Psychology for Physiotherapists. Book · January 2016 with 1,023 Reads. Publisher: 2. Publisher:
ISBN-10: 9386150298 ISBN-13: 978

Zinbarg, R. E., Uliaszek, A. A., & Adler, J. M. (2009). The role of personality in psychotherapy for anxiety and depression. *Journal of Personality*, 76, 1649-1687 .

Wolpe, j. (1973). *The practice of behavior therapy* (2nd ed.) New York: Pergamon Press.

e-resource

www.jpmedpub.com>toc>toc

<https://www.ncbi.nih.gov>articles>

https://en.m.wikipedia.org/wiki/clinical_psychology/

<https://www.verywellmind.com/what-is-clinical-psychology-2795000/>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Neurology

Class: BPT 3rd Year

Name of the Teacher: Priyank Sharda

Availability Timings: 9.00 AM to 3.30 PM

Subject: Neurology

Objectives of the course

To teach the principles and skills underlying the recognition and management of the neurologic diseases, a general medical practitioner is most likely to encounter in practice.

Acquisition of the clinical application of basic knowledge of the nervous system

Development of communication skills that will facilitate the clinical interaction with patients with neurologic disorders and their families.

Acquisition of the knowledge necessary for the diagnosis and initial management of common acute and chronic neurological conditions.

Development of clinical problem-solving skills.

Development of strategies for health promotion and prevention of neurological damage.

Course Content:

The course comprises Neurological symptom theory based on functional neuro-anatomy, Overview about laboratory studies within neurology and various neurological diseases (ALS, spinal cord, multiple sclerosis, polyneuropathy, peripheral pareses, muscle diseases, Parkinson disease and other movement disorders, head-ache, dizziness, stroke, epilepsy, brain tumours), their occurrence, causes, neuro-anatomical background and treatment of these diseases .

Detailed Course content: Available at www.gndu.ac.in

TEACHING METHODS

Lectures : 6 per week

Powerpoint Presentations

Program Learning Outcomes

KNOWLEDGE AND UNDERSTANDING

On completion of the course, the student will be able to account for:

1. Clinical symptoms of various neurological disorders
2. Neurological examination methods and their interpretation
3. The most common neurological diseases, their pathology, causes and management.
4. Differential diagnosis of the most common neurological diseases
5. Basic review of various Neuropsychological Disorders related to brain.

PRACTICAL SKILLS

The students will

Demonstrate proficiency at performing an appropriately focused and reliable neurological examination including cranial nerves, motor function, sensation, reflexes, coordination, and gait.

Understand how to recognize and interpret abnormal findings on the neurological exam; be able to distinguish between upper and lower motor neuron findings, nerve root/plexus, peripheral nerve, neuromuscular junction, and muscle. The students will be able to carry out differential diagnosis of the most common diseases

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE)		
1.Class Tests (Unit wise)	50%	After Each Unit
2.Student Seminars		November Onwards
3. In House Exams	50%	Last Week of September
End of Year Exam	50%	April onwards

Teaching Outline

Unit	Teaching Dates
Neuroanatomy and Neurophysiology	12 July to 31 August
Assessment and evaluative procedures for the neurological patient, Trauma (head injury and spinal cord Injury)	1 September to 20 September
	HOUSETEST
Cerebrovascular accidents, Congenital and childhood disorders	15 October to 05 November
Diseases of the spinal cord, Demyelinating diseases (central and peripheral)	06 November to 30 November
Degenerative disorders , Infections, Diseases of the muscle,	1 December to 20 December
Peripheral nerve disorders, Epilepsy, Myasthenia Gravis,Cranial nerve disorders	10 January to 17 January
Intracranial Tumors, Motor neuron disease, Introduction to neuropsychology, General assessment procedures and basic principles of management.	18January to 28 February
Revision	1 March to 20 March

Attendance policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams

Books Recommended:

Brain's Diseases of the Nervous System - Nalton – ELBS.

References

1. Guided to clinical Neurology - Mohn & Gaectier - Churchill Livingstone.
2. Principles of Neurology - Victor – McGraw Hill International edition.
3. Davidson's Principles and Practices of Medicine - Edward - Churchill Livingstone.

E-resources :

<https://www.medscape.com/>

<https://medlineplus.gov/neurologicdiseases.html>

http://www.freemedicaljournals.com/f.php?f=ip_neuro

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: General Medicine

Class: Bachelors of Physiotherapy (BPT) Annually

Year: III Yr

Objective of the Course:

To acquaint the students with various communicable diseases.

To discuss preventive measures.

Acquaintance with nutritional aspects of health.

Understanding of micronutrient deficiencies and their correlation with diseases.

To understand pathogenesis of diseases of various systems.

Understanding of mental health.

Program Learning Outcomes:

(Knowledge and understanding, intellectual skills, practical skills, transferable skills)

Knowledge and understanding:

Students will be familiarized with pathogenesis of disease in relation to signs and symptoms.

Understanding of symptomatology of disease.

To study clinical aspects of disease along with investigation, diagnosis and management.

Understand complexities of Medicine.

Intellectual (Cognitive/Analytical) skills:

Students will be able to

Understand basis of disease.

Understand signs and symptoms and their correlation to disease.

Understand prevention of disease.

Understand diagnostic aspects of disease.

C. Practical skills:

To develop history taking skills.

To develop confidence in patient education.

To study diagnostic tools more comprehensively.

To conduct practice sessions and practical tests.

D. Transferable skills:

Students will be able to assess various Medical conditions and learn about treatment and prevention.

Books Recommended

1. Davidson's Principles and Practices of Medicine - Edward - Churchill Livingstone.
2. Hutchinson's Clinical Methods - Swash - Bailliere Tindall.
3. A Short Text Book of Medicine - Krishna Rao - Jaypee Brothers.
4. A Short Text Book of Psychiatry - Ahuja Niraj - Jaypee Brothers.

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Orthopaedics

Programme : BPT (Bachelor of Physiotherapy),(Annual system)

Year: III

Name of the Teacher: Dr Sahil Batra, MBBS, MS(ortho)

Objectives of the Course:

This course aims at acquainting students with orthopaedic terminology, imaging techniques, traumatology, brief review of the different surgical conditions in orthopaedics, soft tissue injuries, deformities, degenerative conditions, infections and sports injuries etc.

Detailed Course Contents: Available at www.gndu.ac.in

Program Learning Outcomes:

Knowledge and Understanding):

Students will

Know about the basics of orthopaedics terminology and different imaging techniques.

Learn about the basics of different soft tissue injuries and their management (conservative management).

Learn about UE, LE and spinal Traumatic injuries and their management.

Be acquainted with common deformities and their surgical management.

Know about the basic outline of latest orthopedic surgeries.

Learn about the basics of degenerative joint changes and their management.

Be acquainted with common sports injuries and their management.

Know about the basic procedure of amputation surgery and its rehabilitation

B. Analytical Skills:

Students will be able to

Assess post-op complications of fractures (stiffness, atrophy, contractures ,deformities etc)

Identify different symptoms of soft tissue injuries and their effect on function.

Assess common deformities of spine and limbs.

Assess post-op complications of orthopedic surgeries (atrophy, contractures etc)

Identify different symptoms of joint degeneration and their effect on function.

Understand mechanism of common sports injuries.

Understand the standard procedure of amputation surgeries and their post-op management.

C. Practical Skills

Students will learn to:

Assess and manage different soft tissue conditions conservatively.

Evaluate and manage different deformities conservatively.

Different physiotherapeutic techniques and their applications to manage the post-op complications in patients.

Manage different degenerative conditions conservatively.

Rehabilitate a sports person after any surgical intervention.

Rehabilitate persons after amputation surgery.

D. Transferable Skills :

Students will be able to

-use different orthopaedic terminology and relate them clinically too.

Text Book(s):

1. Watson – Zones, Fractures and Joint Injuries – Wilson – Churchill Livingstone.
2. Clinical Orthopaedic Examination – Mcrae – Churchill Livingstone.
3. Concise System of Orthopaedics and Fractures – Apley – Butterworth Heinmann.
4. Outline of Fractures – Adam – Churchill Livingstone.
5. Outline of Orthopaedics – Adam – Churchill Livingstone.
6. Physical Examination in Orthopaedics – Apley – Butterworth Heinmann.
7. Clinical Orthopaedics Diagnosis – Pandey & Pandey – Jaypee Brothers.

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Physiotherapy in Medical Condition-I

Programme : Bachelors of Physiotherapy (BPT) annually

Yearly : III

Name of the Teacher: Rajbir Kaur Bahia

Availability Timings: 9.00 AM to 3.30 PM

E-mail: rajbirphysio@gmail.com

Objectives of the Course:

The objective of course is to Review of the Pathological and principles of management by Physiotherapy to the following conditions: Inflammation, Edema, Arthritis and Allied Conditions, Common conditions of Skin, Deficiency diseases and Psychiatric Disorders.

It also gives review of mechanism of normal respiration and review of pathological changes and principle of management by physiotherapy of the respiratory and cardiovascular conditions.

Course Content:

The course provides introduction of the Pathological and principles of management by physiotherapy in Traumatic, obstructive, Paralytic, Oedema due to poor muscle and laxity of the fascia. Physiotherapy in conditions like Osteo – arthritis – generalised, Degenerative and traumatic, Spondylosis and disorders. Rheumatoid Arthritis, Still's disease, infective Arthritis. Spondylitis, Ankylosing Spondylitis. It provides addition information on soft tissue injuries, diseases and disorders of skin , care of elderly, and it also cover other conditions like systemic conditions, and bone disease has been condensed. It also provide information of neurological and psychological conditions. It also give knowledge of basic investigative procedures (invasive and non invasive) used in the diagnosis of various condition of respiratory and cardiovascular conditions. It includes Review of anatomy & physiology of the cardiovascular system and Chest examination, including auscultation, percussion.

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : six per week

Student Seminars: one per week

Assignments : The students will be asked to read the textbook in advance and write articles on given topics

PowerPoint Presentations

Practical

Test Written

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, practical Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

Able to know how to assess the general medical condition, cardiovascular condition and respiratory condition on the basis of path physiology.

Able to understand the condition from which patient suffers, the potential recovery rate and complication which may arise.

Able to plan the particular treatment which must be carefully selected to fulfill the aims and objectives and then evaluated the patient and changed as necessary.

Able to demonstrate the effectiveness and efficiency of treatment in various conditions.

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

Communicate with patient regarding their conditions.

Think more effectively to get the better results of their treatment sessions.

Understand how to deal with patient on basis of their language and behavior.

Have a creative thinking how to make patient independent as soon as possible.

Understand various investigative procedures (invasive & noninvasive) used in the diagnosis of various respiratory disorders.

Understand various investigative procedures (invasive & noninvasive) used in the diagnosis of various cardiovascular disorders.

Practical Skills

Student will learn to :

Have knowledge of rationale of basic investigative approaches in medical system and surgical intervention regimes related to cardiovascular and pulmonary conditions.

Acquire the skill of evaluation and interpretation of functional capacity by using exercises, like 6 minute walk test.

Able to select strategies for cure, care and prevention: adopt restorative and rehabilitative measures for maximum possible functional independence of patient at home, workplace and in community.

Able to execute the effective physiotherapy measures with emphasis to breathing exercises, postural drainage and general mobilization.

D. Transferable Skills:

Students will be able to

Learn how to command the patient during his/her treatment sessions.

Demonstrate the exercises, home advice, ergonomics advice to the patient.

Use patient language during treatment for patient comfort.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE) 1.Class Tests (Unit wise) 2.Student Seminars 3. In House Exams		
	50%	After Each Unit
	50%	September onwards
		Last Week of September
End of Semester Exam	50%	April onwards

Teaching Outline:

Unit	Teaching Dates
Section I	12 July to 31Aug
Section I	1 September to 20 September
	House Test
Section II	15 October to 05 November
Section II	06 November to 30 November
Section III	1 December to 17 December
Section III	06 January to 28 February
Revision	1 March to 15 March

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

Cash Textbook of General Medical and Surgical Conditions for Physiotherapists – Downie - Jaypee Brothers.

Cash Textbook of Chest, Heart and Vascular Disorders for Physiotherapists - Downie - J.P.Brothers.

Tidy's physiotherapy, Stuart B. Porter

References:

Cyriax, J., 1982. Textbook of Orthopaedic Medicine: Diagnosis of Soft Tissue Lesions, eighth ed. Ballière Tindall, London.

Bolton, C.E., Ionescu, A., Shiels, K., et al., 2004. Associated loss of fat-free mass and bone mineral density in chronic obstructive pulmonary disease. Am J Respir Crit Care Med 170, 1286–1293.

Bradley, J., Moran, F., 2006. Pulmonary rehabilitation improves exercise tolerance in patients with bronchiectasis. Aust J Physiotherapy 52 (1), 65.

AACVPR (American Association of Cardiovascular and Pulmonary Rehabilitation), 2006. Guidelines for Cardiac Rehabilitation and Secondary Prevention Programs, fifth ed. Human Kinetics, Champaign, IL.

BHS (British Hypertension Society), 2004. British Hypertension Society Guidelines IV, 2004, accessed October 2012.

E- resources

<http://www.bhsoc.org/resources/latestguidelines/>,

<https://www.scribd.com>document>tidy's>

<https://www.elsevier.com>books>porter>

<https://www.physiotherapyjournal.com>

<https://books.google.co.in>books>about>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Physiotherapy in Orthopedic conditions (PTO)

Programme : BPT (Bachelor of Physiotherapy),(Annual system)

Year: III

Name of the Teacher: Dr Raju Sharma

Availability Timings: 9.00 AM to 3.30 PM

E-mail:dr_sharma13@yahoo.co.in

Objectives of the Course:

This course aims at acquainting students with brief review of the different surgical conditions in orthopaedics, soft tissue injuries, deformities, degenerative conditions, sports injuries etc. and various physiotherapeutic modalities, their aims, means and technique of physiotherapy for them.

Course Content: The course provides an introduction to-

1. Traumatology: General Physiotherapeutic approach for the fractures of upper limb, lower limb and spine.
2. Soft tissue injuries and their management.
- 3 common congenital and acquired deformities of limbs, spine and their management
4. Common corrective orthopaedic surgical procedures and their pre and post operative physiotherapy management.
5. Amputation surgeries; pre and post prosthetic management including check out of prosthesis, training etc.
6. Common degenerative and infective orthopaedic conditions treated by physiotherapy.
7. Principles of sports physiotherapy and role of therapist in advanced rehabilitation of the injured athlete.

Detailed Course Contents: Available at www.gndu.ac.in

What will be the teaching methods:

Lectures : six per week

Student Seminars: 3 per week

Power point Presentations

Participatory and Experiential Learning

Program Learning Outcomes:

Knowledge and Understanding):

Students will

Know about the basics of traumatology and need of post op physiotherapy.

Learn about the basics of different soft tissue injuries and role of physiotherapy in their management (conservative management).

Be acquainted with common deformities and role of a therapist in prevention and their management.

Know about the basics of latest orthopedic surgeries and need of post op physiotherapy.
 Learn about the basics of degenerative joint changes and their effect on the QOL of the patients and role of physiotherapy in improving QOL.
 Be acquainted with common sports injuries and role of a sports therapist in prevention and management.
 Know about the basic procedure of amputation surgery and its rehabilitation

B. Analytical Skills:

Students will be able to
 Assess post-op complications of fractures (stiffness, atrophy, contractures ,deformities etc)
 Identify different symptoms of soft tissue injuries and their effect on function.
 Assess common deformities of spine and limbs.
 Assess post-op complications of orthopedic surgeries (atrophy, contractures etc)
 Identify different symptoms of joint degeneration and their effect on function.
 Assess common sports injuries.
 Identify the problems of amputees and their rehabilitations.

C. Practical Skills

Students will learn to:
 Different physiotherapeutic techniques and their applications to manage the post-op complications in patients.
 Manage different soft tissue conditions conservatively.
 Evaluate and manage different deformities conservatively.
 Different physiotherapeutic techniques and their applications to manage the post-op complications in patients.
 Manage different degenerative conditions conservatively.
 Rehabilitate a sports person after any surgical intervention.
 Rehabilitate persons after amputation surgery.

D. Transferable Skills :

Students will be able to
 -use different physiotherapeutic techniques effectively accordingly.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal		

Evaluation(CIE)	50%	After Each Unit
1.Class Tests (Unit wise)		
2.Student Seminars		Every week
3In house exam	50%	Last week of Sept.
End of Year Exam	50%	Second week of April onwards

Teaching Outline:

Unit	Teaching Dates
I	12 July to 15 Aug.
II	16 Aug to 15 Sept.
	House test
II	5 Nov to 20 Dec.
III	10Jan to 28 Feb.
Revision	Till 15 March.

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1. Cash text book of Orthopaedics and Rheumatology for Physiotherapists – Downie - Jaypee Brothers.
2. Essentials of orthopaedics and applied physiotherapy – Joshi and Kotwal - B.L. Churchill Livingstone.

References:

1. Tetraplegia & Paraplegia - Bromley - W.B. Saunders.
2. Orthopaedic Physiotherapy - Tids well – Mosby
3. Tidy’s Physiotherapy - Thomson et al -Butterworth Heinmann
4. Orthopaedic Physiotherapy - Donatelli & Wooden - W.B. Saunders.
5. Rheumatological Physiotherapy - David – Mosby
6. Orthopaedic Physiotherapy - Tids well - Mosby.
7. Physiotherapy for Amputee - Engstrom & Van de van - Churchill Livingstone.
8. Sports Injuries: Diagnosis and Management - Norris Butterworth Heinmann.

E- resources

<https://youtu.be/1XeziL11bBw/>

<https://youtu.be/Qe6VNXXOJaw/>

<https://youtu.be/37kNNU9492Q/>

<https://youtu.be/PpDkcgOZWJs/>

<https://youtu.be/WdxDFzhay1g/>

<http://youtu.be/kNvtEMTF6YE/>

<https://youtu.be/Pls9GnANxWC/>

<https://youtu.be/1Au4XmBHc/>

<https://youtu.be/P9g06sCZCnc/>

Class: BPT IV Year

Name of the Teacher: Priyank Sharda

Availability Timings: 9.00 AM to 3.30 PM

Subject: PT in Medical Conditions-II

Objectives of the course

This course aims at acquainting students with techniques to identify and analyze, the Musculo Skeletal, cardiopulmonary and neurological Dysfunction in geriatrics and paediatrics patients & correlate the same with the provisional diagnosis, routine radiological & Electrophysiological investigations & arrive at appropriate functional diagnosis with clinical reasoning. It will enable students to plan & prescribe as well as acquire the skill of executing short & long term Physiotherapy treatment by selecting appropriate modes of Mobilisation, manipulations, Electro Therapy, Therapeutic exercise & rehabilitation.

Course Content:

The course will acquaint students with procedures for examination of various cardiopulmonary, neurological, musculoskeletal or vitamin deficiency disorders, principles of treatment and physiotherapeutic care of the patient in intensive care. It will integrate theory and practical skills in the management of geriatrics and paediatrics patients in a health care setting. The course also includes various investigative procedures (invasive & noninvasive) used in the diagnosis of various neurological disorders and review of pathological changes in these disorders.

Detailed Course content: Available at www.gndu.ac.in

TEACHING METHODS

Lectures : Theory 6 per week and Practical 6 per week

Assignments: The students will be asked to write articles on given topics

Powerpoint Presentations

Program Learning Outcomes

KNOWLEDGE AND UNDERSTANDING

On successful completion of the course students will be able to:

1. Apply biomedical and behavioural scientific knowledge to the physiotherapy evaluation and management of geriatrics and paediatrics patients in cardiopulmonary, neurological, musculoskeletal or vitamin deficiency disorders.
2. Describe the aetiology, epidemiology, pathogenesis and clinical presentation of complex pulmonary and cardiovascular neurological and various musculoskeletal disorders.
3. Conduct an appropriate examination of geriatrics and paediatrics patients including history and physical examination
4. Describe the conservative management of complex pulmonary, cardiac, vascular and neurological disorders

5. Understand the functions of the multidisciplinary team in the management of neurological and cardiopulmonary patients, including intensive care and cardiopulmonary rehabilitation, and describe the physiotherapists role in the multidisciplinary team.

PRACTICAL SKILLS

On successful completion of the course the students will learn to:

Appropriately select, modify as necessary, and correctly demonstrate measurement and testing procedures commonly used in assessing geriatrics and paediatrics patients in cardiopulmonary, neurological and various musculoskeletal disorders.

Appropriately select, modify as necessary, and correctly demonstrate physiotherapeutic treatment procedures commonly used in the management of cardiopulmonary, neurological and various musculoskeletal disorders.

Apply advanced clinical reasoning skills and a sophisticated evidence based approach to decision making in cardiopulmonary, neurological and various musculoskeletal disorders.

Demonstrate a well developed understanding of the physiotherapist's role in promoting wellness as relevant to the pulmonary and cardiovascular systems.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE)		
1.Class Tests (Unit wise)	50%	After Each Unit
2.Student Seminars		November Onwards
3. In House Exams	50%	Last Week of September
End of Year Exam	50%	April Onwards

Teaching Outline

Topics	Teaching Dates
Examination of Neurological disorders and principles of treatment, Hemiplegia, Paraplegia	12 July to 31 August
Paraplegia contd. and extra pyramidal lesions, Parkinsonism, Traumatic head injuries and spinal cord injury	1 September to 20 September
	HOUSTEST
Tabes dorsalis, cerebellar ataxia, Gullian Barre Syndrome, Disseminated sclerosis, Amyotrophic lateral sclerosis, Peripheral Nerve and cranial Nerve lesions	15 October to 05 November
Syringomyela, subacute combined degeneration of cord, Motor Neuron Disease, Knowledge of various investigative procedures (invasive & noninvasive), Neuritis and Neuralgia, Infections, Polyneuritis, Transverse myelitis.	06 November to 30 November

Examination & assessment of a Paediatric patient, Cerebral palsy, Common congenital & acquired neurological disorders (CNS & PNS),	1 December to 20 December
Common congenital & acquired Musculo skeletal disorders, myopathy and muscular dystrophies	10 January to 17 January
Common heredity disorders, Common nutritional, metabolic & vitamin deficiency disorders, Geriatrics	18 January to 28 February
Revision	1 March to 20 March

Attendance policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams

Books Recommended:

1. Cash's Textbook of Neurology for Physiotherapists - Downi - J.P. Brothers.
2. Adult Hemiplegia – Evaluation & Treatment - Bobath - Oxford Butterworth Heinmann.
3. Neurological Rehabilitation – Carr & Shepherd -Butterworth Heinmann.
4. Tetraplegia & Paraplegia – A Guide for Physiotherapist - Bromley - Churchill Livingstone.
5. Neurological Physiotherapy – A Problem Solving Approach - Susan Edwards - Churchill Livingstone.
6. Neurological Rehabilitation - Umpherd - Mosby.
7. Geriatric Physical Therapy - Gucciona - Mosby.
8. Motor Assessment of Developing Infant - Piper & Darrah - W.B, Saunders.
9. Paediatric Physical Therapy - Teckling - Lippincott.
10. Treatment of Cerebral Palsy and Motor Delay - Levitts - Blackwell Scientific Publications, London.
11. Aging the Health Care Challenge - Levis - F.A. Davis.
12. Physiotherapy in Paediatrics - Shepherd - Butterworth Heinmann.

E-resources :

<https://www.stroke.org.uk/resources/physiotherapy-after-stroke>

<https://www.physio-pedia.com/home/>

<https://www.journalofphysiotherapy.com/>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Community Physiotherapy & Rehabilitation

Programme :Bachelors of Physiotherapy (BPT) annually YEAR: IV

Name of the Teacher: Richa Sharma

Availability Timings: 9.00 AM to 3.30 PM E-

mail: richaphysiolkc@gmail.com

Objectives of the Course:

This course aims at acquainting students about Surveillance, Monitoring & Screening in Occupational Health, Work Disability. It also aims at acquainting students about Ergonomics, Work related musculoskeletal disorders, Industrial Hygiene ,Women's Occupational health disorders.

This also aims at acquainting students about nutrition in public health, family planning and problems related to aged.

Course Content:

This course provides an introduction to study the types of work place health examination and work disability management.

Course also explores the hazard evaluation and control, community and social obstetrics, teaching about maternal and child health.

It also tells about policies and laws of family planning and programs and finally about health problems due aging, illness and psychological causes.

Detailed Course Contents: Available at www.gndu.ac.in What will

be the teaching methods:

Lectures : six per week

Viva: 2/ Week

Assignments : The students will be asked to read the textbook in advance and write articles on given topics

Powerpoint Presentations

Class tests - written

Program Learning Outcomes:

(Knowledge and Understanding, Analytical Skills, practical Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

Know how to define surveillance, monitoring, screening, work disability, ergonomics, industrial hygiene.

Understand and explain the basic concept of community and social obstetrics, maternal and child health.

Students will understand and able to describe the family planning program and practices .

Analytical Skills:

Students will be able to

To provide an insight functioning of various health agencies

To make understanding easier about community health in various perspectives.

To help in the understanding of problems of the elderly.

To learn about the special focus which the government places on womens health and child health.

To work for overall prevention of disease.

Practical Skills

Students will :

gain practical community skills by visiting various small industries.

Learn about Survey study in community

Do file work for various occupational disorders

Transferable Skills :

Students will be able to:

Assess various occupational related musculoskeletal disorders.

Assess various nutritional disorders in child and maternal health.

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE)		
1.Class Tests (Unit wise)	50%	After Each Unit
Student Seminars		Every week
In House Exams	50%	Last Week of September
End of Yearly Exam	50%	Last week of April onwards

Teaching Outline:

Unit	Teaching Dates
I & II	12 July to 15 Aug
III & IV	16 Aug to 20 September
	House Test
V & VI	5 November to 20 December
VII & VIII	10 January to 28 February
Revision	Till 15 march

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1 . K. Park, Park’s Textbook of Preventive and Social Medicine (

References:

1 Textbook of Comm. Med & Comm. Rehab – Bhasker Rao
Geriatric Physical Therapy – Andrew Guccione

E- resources

<https://www.ncbi.nlm.nih.gov/articles>

<https://www.abebooks.com>title>author>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Pediatrics & Geriatrics

Programme : Bachelors of Physiotherapy (BPT) annually YEAR: IV

Name of the Teacher: Richa Sharma

Availability Timings: 9.00 AM to 3.30 PM E-

mail: richaphysiolkc@gmail.com

Objectives of the Course:

Acquire knowledge in brief about intrauterine development of the foetus.

Be able to describe normal development and growth of a child. Importance of immunization & breast feeding.

Be able to describe neuromuscular , musculoskeletal, cardiovascular & pulmonary conditions.

Acquire skill of clinical examination of a neonate.

Acquire knowledge about anatomical , physiological and cognitive changes related to aging., there clinical examination and disorders.

Course Content:

The course provides an introduction to the study of normal foetal development and child birth, it also explores the development of normal child, various conditions related to pediatrics and specific interventions.

The course also provides an introduction to the study of normal aging process and there disorders.

Detailed Course Contents: Available at www.gndu.ac.in What will

be the teaching methods:

Lectures : six per week

Viva: 2/ Week

Assignments : The students will be asked to read the textbook in advance and write articles on given topics
Powerpoint Presentations
Class tests - written

Program Learning Outcomes:

(Knowledge and Understanding, Analytical Skills, practical Skills, Transferable skills).

Learning Outcomes:

Knowledge and Understanding):

Students will

Know how to define various terms related to pediatrics and geriatrics.

Able to understand the normal child development and normal aging process.

Students will be able to understand various conditions related to pediatrics and geriatrics along with their clinical features, investigations, diagnosis and treatment.

Analytical Skills:

Students will be able to

To make understanding easier about impact of aging on the persons health

To help elderly integrate in society.

To understand complex effects of health care.

To help elderly overcome various hurdles in everyday life.

Practical Skills

Students will learn : how to examine normal child.

How to examine primitive reflexes.

To teach geriatric assessment

To teach ergonomic advice given to elderly patients.

To conduct practice sessions and practical test.

Transferable Skills :

Students will be able to:

Assess various pediatric and geriatric conditions and formulate the problem list and make short and long term goals of interventions

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous Internal Evaluation(CIE)		
1.Class Tests (Unit wise)	50%	After Each Unit
Student Seminars		Every week
In House Exams	50%	Last Week of September
End of Yearly Exam	50%	Last week of April onwards

Teaching Outline:

Unit	Teaching Dates
I Pediatrics (1-5)	12 July to 15 Aug
II Pediatrics (6-10)	16 Aug to 20 September
	House Test
III Geriatrics (1-5)	5 November to 20 December
IV Geriatrics (6-10)	10 January to 28 February
Revision	Till 15 march

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1 . Pediatrics – O.P. Ghai

References:

1 Nelson Textbook of Pediatrics- Behrman & Vaughan – W.B. Saunders.

Geriatric Physical Therapy – Andrew Guccione- Mosby

3.The short textbook of pediatrics – Gupte –Jaypee

E-Resources

<https://www.elsevierhealth.com.au>physiotherapy-in-pediatrics/>

<https://en.m.wikibooks.org>wiki>paediatric.....>

<https://www.booktopia.com.au>university/>

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: General Surgery

Class: Bachelors of Physiotherapy (BPT) Annually

Year: IV Yr

Objective of the Course:

To understand principles of surgery.

Familiarising with common Gynaecological disorders.

To understand the science of child birth

To familiarize with various Ophthalmological and ENT disorders.

Program Learning Outcomes:

(Knowledge and understanding, intellectual skills, practical skills, transferable skills)

A. Knowledge and understanding:

Students will learn about various surgical procedures.

To learn about complications of surgery.

To understand pregnancy, stages of labour and its complications.

Indications and types of surgical procedures.

To read and learn about various Gynaecological disorders.

To learn about Ophthalmological and ENT disorders.

B. Intellectual (Cognitive/Analytical) skills:

Students will be able to

Understand various surgical procedures and complications.

To learn about various Gynaecological disorders.

Understanding of Obstetrics

Understand various Ophthalmological and ENT disorders and their management.

C. Practical skills:

To familiarize students with instruments used in surgery.

To observe normal delivery.

To observe surgical procedures and their indications in :-

General Surgery

Gynaecology and Obstetrics

ENT

D. Transferable skills:

Students will be able to assess and learn about various surgical procedures and complications, Obstetrics and Gynecological disorders, Ophthalmological disorders and ENT disorders.

Books Recommended

1. Baily and Love - Short Practice of Surgery - Mann and Rains - H.K. Levis Publications, London.
2. Undergraduate Surgery - Nan - Academic Publishers, Calcutta.
3. Textbook of Surgery - Gupta R.L. - Jaypee.
4. Principles and Practices of Trauma Care - Kocher - Jaypee.
5. Clinical Methods - S. Das - Calcutta.

CURRICULUM PLANNING AND IMPLEMENTATION

Course Name: Physiotherapy in Surgical Conditions

Programme: Bachelor of physiotherapy(BPT) annually

YEARLY: I

Name of the Teacher: Dr. Komaldeepkaur

Availability Timings: 9.00 AM to 3.30 PM

E-mail: dr.komaldeep@gmail.com

Unit-I

Objective-This section aims at acquainting students about the thoracic surgery refers to operations on organs in the chest, including the heart, lungs and esophagus. Examples of thoracic surgery include coronary artery bypass surgery, heart transplant, lung transplant and removal of parts of the lung affected by cancer.

Course content

Review of pathological changes and principle of pre and post operative management by physiotherapy of the following conditions:

- 1) Lobectomy, Pneumonectomy, Thoracotomy, Thoracoplasty, Endoscopy & eye hole surgeries.
- 2) Corrective surgeries of congenital heart defects, angioplasties, blood vessel grafting, open heart surgeries & heart transplant.

Learning outcome

Understanding and knowledge

Student will

- Know how to define various thoracic surgeries
- Understand and explain the basic concepts associated with surgical procedures
- Students will understand and able to describe physiotherapy management of various thoracic surgeries
- Physiotherapy management in Pre and Post Cardiothoracic surgeries relevant to cardiac conditions. Cardiac rehabilitation.
- Able to know how to assess the general medical condition, cardiovascular condition and respiratory condition on the basis of path physiology.
- Able to understand the condition from which patient suffers, the potential recovery rate and complication which may arise.

- Able to plan the particular treatment which must be carefully selected to fulfill the aims and objectives and then evaluated the patient and changed as necessary.
- Able to demonstrate the effectiveness and efficiency of treatment in various conditions.

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

- Communicate with patient regarding their conditions.
- Think more effectively to get the better results of their treatment sessions.
- Understand how to deal with patient on basis of their language and behavior.
- Have a creative thinking how to make patient independent as soon as possible.
- Understand various investigative procedures (invasive & noninvasive) used in the diagnosis of various respiratory disorders.
- Understand various investigative procedures (invasive & noninvasive) used in the diagnosis of various cardiovascular disorders.

Practical Skills

Student will learn to :

- Have knowledge of rationale of basic investigative approaches in medical system and surgical intervention regimes related to cardiovascular and pulmonary conditions.
- Acquire the skill of evaluation and interpretation of functional capacity by using exercises, like 6 minute walk test.
- Able to select strategies for cure, care and prevention: adopt restorative and rehabilitative measures for maximum possible functional independence of patient at home, workplace and in community.
- Able to execute the effective physiotherapy measures with emphasis on breathing exercises, postural drainage and general mobilization.

Unit-II

Objective-This section aims at acquainting students Cardiopulmonary and Integumentary Physiotherapy is to provide comprehensive knowledge about the Physiotherapy interventions in various Cardiac, Pulmonary, vascular and Integumentary conditions and to teach skills to practice as a qualified Physiotherapist.

COURSE CONTENT

At the end of the course, the candidate will -

- 1] Identify, discuss & analyze cardio-vascular & pulmonary dysfunction in adult & pediatric, based on Biomechanical & Patho-physiological principles

& arrive at the appropriate functional diagnosis

2] Acquire knowledge of rationale of basic investigative approaches in the medical system & surgical intervention regimes related to cardio-vascular & pulmonary impairment & peripheral vascular conditions

3] Acquire the skill of evaluation & interpretation of functional capacity.

4] Be able to select strategies for cure, care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at home, work place & in community.

5] Be able to execute the effective Physio Therapeutic measures in adult & pediatric with appropriate clinical reasoning to improve pulmonary function.

6] Be able to design & execute effective tailored cardiac rehabilitation programme.

7] Acquire knowledge of the overview of patients care at the Intensive care area.

8] Acquire knowledge of different integumentary conditions and methods of skin care.

9] Be able to execute the effective Physio Therapeutic measures in adult & pediatric condition with appropriate clinical reasoning .

Learning outcome

Understanding and knowledge

Student will

The following topics are applicable to all the adult & paediatric cases related to cardiovascular, pulmonary and Integumentary condition

1] Physical Assessment (Physical Diagnosis & Therapeutic Skills syllabus)

2] Interpretation of following investigations & co-relate the same with clinical findings

Chest X-rays, ABG's, ECG (relevant to ischemic conditions and enlargement/hypertrophy of heart chambers), Spirometry and flow volume loops, and Routine Biochemical investigations

- **Level 2:** ECG (relevant to bundle blocks), Echocardiography,

CT chest, Doppler studies, Angiography

- **Level 3:** MRI/CT heart

3] Functional diagnosis - ICF

4] Functional Capacity

Assessment based on VO₂ max and METs (indirect method???)

- **Level 2:** Direct assessment of VO₂max

5] Fitness training in prevention and management of cardiopulmonary

conditions

Exercise prescription, FITT principle. To consider effect of pharmacological agents during exercise testing and training.

6] Planning short & long term goals with clinical reasoning

Practical skill

Student will practice the physiotherapy treatment for occupational disorder

Unit–III

Objective-.Intensive Care Unit

Mechanical ventilation-Basic modes like Pressure/volume support, CMV, A/C, SIMV, PEEP, CPAP, weaning off the ventilator, Techniques and equipments for Manual hyperinflation, Intubations, Suctioning, Oxygen therapy, equipments for Continuous monitoring of patients, Measures to improve bronchial hygiene like breathing exercises, modified PD, Positioning for bronchial hygiene, equipments like Flutter, and General Mobilisation

Advanced modes of mechanical ventilation like NIPPV, Bi-level positive airway pressure, High frequency ventilation

Course content

Advanced modes of mechanical ventilation like NIPPV, Bi-level positive airway pressure, High frequency ventilation

Learning outcome

Understanding and knowledge

Student will

Know how to define the Intensive Therapy – Clinical Management

- Pediatric& Neonatal Intensive Therapy
- Understand and explain the 2) Intensive Therapy – Apparatus (Ventilations, Tubes, Humidifiers etc.)
- Students will understand Intensive Therapy of Adult Patient

Unit–IV

Objective- This section will impart the knowledge of antenatal care which is the care of the woman during pregnancy ,child care ,health indicators and family planning. Obstetrics and gynecology are medical specialties that focus on two different aspects of the female reproductive system.

Course content-Review of pathological changes and principle of pre and post operative management by physiotherapy of the following conditions:

- 1) Common abdominal surgeries, including GIT, liver, spleen, kidney, bladder etc.
- 2) Common operation of reproductive system, including surgical intervention for child delivery. Ante natal & post natal, physiotherapy
- 3) Common operations of the ear, nose, throat & jaw as related to physiotherapy.
- 4) Common organ transplant surgeries – heart, liver, bone marrow etc.

Learning outcome

Understanding and knowledge

Student will

- Know how to define the Community Obstetrics, Social Obstetrics, Maternal & Child Health and family planning
- Understand and explain the antenatal disorder associated with mother.
- Students will understand and able to evaluate the various policies and laws related family planning programs

Practical skill

Student will practice the physiotherapy treatment for women health related disorders

Unit–V

Objective - Review of pathological changes and principle of pre and post operative management by physiotherapy

Course content

Wounds, ulcers, pressure sores.

2) Burns & their complications.

3) Common reconstructive surgical proceedings of the management of wounds, ulcers, burns & consequent contractures & deformities.

Learning outcome

Understanding and knowledge

Student will

- know how to define burns and its complications
- Better recognize wounds ,ulcers and its consequent contractures and deformities.

Practical skill

- Plan an effective treatment program.
- Improve over all health and functional outcomes.
- Reduces vulnerability to subsequent illness.
- Provide better quality of life.

Unit VI

- **Objectives :Neurosurgery** Conditions that require brain surgery include brain **cancer, stroke** and hydrocephalus. If left untreated, any condition requiring brain surgery can cause further damage to the brain. A craniotomy is an operation to open the skull in order to access the brain for surgical repair.
- Course content Review of pathological changes and principle of pre and post operative management by
- physiotherapy of the following conditions:
 - 1) Common surgeries of the cranium & brain.
 - 2) Common surgeries of vertebral column & spinal cord.
 - 3) Common surgeries of peripheral nerves.
 - 4) Surgical interventions in traumatic head injuries.

Practical skill-

To study pre and post physiotherapy management of head injuries, peripheral nerves, vertebral column and spinal cord

D. Transferable Skills:

Students will be able to

- Learn how to command the patient during his/her treatment sessions.
- Demonstrate the exercises, home advice, ergonomics advice to the patient.
- Use patient language during treatment for patient comfort

Modes of Assessment	Minimum Score Required (to Qualify for the Next Exam/Class)	Schedule
Continuous	Internal	

Evaluation(CIE)	50%	After Each Unit
1.Class Tests (Unit wise)		September Onwards
2.Student Seminars	50%	Last Week of September
3. In House Exams		
End of Semester Exam	50%	Second week of April onwards

Teaching Outline:

Unit	Teaching Dates
I	12 July to 31 August
II	1 September to 20 September
	House test
III	15 October to 5 November
IV	10 January 28 February
Revision	Till 30 march end

Attendance Policy

Lecture attendance is mandatory. Students are expected to maintain 75% attendance of the total lectures delivered, failing which they will be detained from appearing in university exams.

Text Book(s):

1. Cash Textbook of general medical and surgical conditions for physiotherapists – Downie – Jaypee Brothers.
2. Cash textbook of heart, chest and vascular disorders for physiotherapists – Downie – Jaypee Brothers.
3. Principles and practices of cardiopulmonary physical therapy – Frown Felter – Mosby.
4. Chest physiotherapy in intensive care unit – Mackenzie – Williams & Wilkins.

References:

- Nici, L, et al: Pulmonary rehabilitation. American Thoracic Society,European Respiratory Society Statement on Pulmonary Rehabilitation.
- Am J Respir Crit Care Med 173:1390, 2006.

- Hughes, R, and Davison, R: Limitation of exercise reconditioning in GOLD. Chest 83:241,1983.
- Pierce, A, et al: Responses to exercise training in patients with emphysema. Arch Intern Med 114:28, 1964.
- Foster, S, and Thomas, H: Pulmonary rehabilitation in lung disease other than chronic obstructive pulmonary disease. Am Rev Respir Dis 141:601, 1990.
- Carter, MJ, Tingley-Kelley, K, and Warriner, RA: Silver treatments and silver-impregnated dressings for the healing of leg wounds and ulcers: A systematic review and meta-analysis.
- J Am Acad Dermatol 63(4):668, 2010.212. Cohn, S, et al: Open surgical wounds: How does Aquacel compare with wet-to-dry gauze? J Wound Care 13(1):10, 2004.213. Bethell, E: Why gauze dressings should not be the first choice to manage most acute surgical cavity wounds. J Wound Care12(6):237, 2003.
- Roger, VL, et al: Executive summary: Heart disease and stroke statistics—2011 update: A report from the American Heart Association. Circulation 123:e18–e209, 2011. Xu, J, et al: Deaths: Final data for 2007. Natl Vital Stat Rep 58: 1–135, 2010.
- National Center for Health Statistics. Health Data Interactive.Retrieved August 20, 2011, from www.cdc.gov/nchs/hdi.htm.
- Barnett, E, et al: Men and Heart Disease: An Atlas of Racial and persistent vegetative state (2). N Engl J Med 330(22):1572, 1994.

E- resources

- <https://drive.google.com/open?>
- www.baileyandlove.com
- http://drive.google.com/file/d/1hUoFJXKXwgApaj-Zn_MPbaPZOKkSeoOY/view?usp=drivedk
- www.cdc.gov/traumaticbraininjury/get_the_facts.html.
- <https://www.neuroskills.com >braininjury>
- <https://www.researchgate.net>publication>
- <https://www.elsevier.ca>product/>

