

BACHELOR OF PHYSIOTHERAPY

Programme outcome (POs)

After successful completion of course, student learns:

1. Co-operation with other members of health team
2. Sense of responsibility as a team member
3. Interpersonal communication skills
4. Empathetic attitude towards the patients
5. Positive behavioral approach towards patients as well as persons with disabilities.
6. Decision making independently with respect to the treatment
7. Research attitude to rationalize the treatment options
8. Importance of referral system

Programme specific out comes:

After successful completion of programme, student is able to:

1. Perform functional assessment of different musculoskeletal as well as neuromuscular impairments
2. Evaluate and recording of joint range of joint motion.
3. Evaluate and grading of muscle strength.
4. Evaluate and training of muscle coordination.
5. Evaluate and training of balance.
6. Apply joint mobilization and different manipulative techniques on patients having joint disorders or derangements
7. Evaluate posture, postural problems and reeducation of posture
8. Evaluation of work related problems and application of ergonomics
9. Evaluate respiratory issues and application of retraining techniques/
10. Strengthen muscles following different range of musculoskeletal problems.

Course Outcomes

Course Name: Anatomy

Programme: Bachelor of Physiotherapy (BPT)

1st year

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 Outcomes:

A. 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

Course Name: Physiology

Programme : Bachelor of Physiotherapy(BPT) 1st year

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 Outcomes:

A. 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.

Course Name: Biochemistry

Programme : Bachelor of Physiotherapy(BPT) 1st year

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 Outcomes:

B. 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.

Subject: Electrotherapy-1**Programme : Bachelor of Physiotherapy(BPT) 1st year****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 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 modalitis.
- 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.

Course Name: Exercise Therapy - I

Programme : Bachelor of Physiotherapy(BPT) 1st year

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 Outcomes:

A. 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.

B. 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.

C. 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.

D. 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.

Course Name: Sociology & Community Health

Programme : Bachelor of Physiotherapy(BPT) 1st year

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 Outcomes:

B. 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

ਪਰਚਾ: ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ

ਕੋਰਸ ਦਾ ਨਾਂ: ਬੀ.ਏ / ਬੀਐੱਸ.ਸੀ / ਬੀਐੱਸ.ਸੀ (ਬੀ.ਟੀ.) / ਬੀ.ਕਾਮ/ ਬੀ.ਸੀ.ਏ/ ਬੀ.ਵਾਕ/ ਬੀ.ਐਮਐਮ

ਸਮੇਸਟਰ: ਪਹਿਲਾ

ਕੋਰਸ ਦੇ ਉਦੇਸ਼ :

ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਸਾਹਿਤ ਪੜ੍ਹਣ ਦੀ ਰੁਚੀ ਪੈਦਾ ਕੀਤੀ ਜਾਵੇਗੀ। ਬੌਧਿਕ ਪੱਧਰ ਤੇ ਵਿਕਾਸ ਕੀਤਾ ਜਾਵੇਗਾ। ਅਲੋਚਨਾਤਮਕ ਰੁਚੀਆਂ ਪੈਦਾ ਕੀਤੀਆਂ ਜਾਣਗੀਆਂ। ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਆਪਣੀ ਮਾਂ ਬੋਲੀ ਵਿਚ ਸੰਚਾਰ ਕਰਨ ਲਈ ਉਤਸ਼ਾਹਿਤ ਕੀਤਾ ਜਾਵੇਗਾ। ਵਿਦਿਆਰਥੀਆਂ ਦੀਆਂ ਵਿਦਿਅਕ, ਬੌਧਿਕ ਅਤੇ ਸਰਬਪੱਖੀ ਪ੍ਰਤਿਭਾਵਾਂ ਨੂੰ ਉਭਾਰਨ ਵੱਲ ਵਿਸ਼ੇਸ਼ ਧਿਆਨ ਦੇਣਾ।

ਕੋਰਸ ਨਾਲ ਹੋਣ ਵਾਲੀਆਂ ਪ੍ਰਾਪਤੀਆਂ ਦੀਆਂ ਸੰਭਾਵਨਾਵਾਂ :

1. ਸਾਹਿਤਕ ਰੁਚੀਆਂ ਪੈਦਾ ਹੋਣਗੀਆਂ।
2. ਸਾਹਿਤ ਸਿਰਜਣ ਦੀ ਰੁਚੀ ਪੈਦਾ ਹੋਵੇਗੀ।
3. ਭਾਸ਼ਾ ਦੀ ਅੰਦਰੂਨੀ ਬਣਤਰ ਸੰਬੰਧੀ ਗਿਆਨ ਪ੍ਰਾਪਤ ਹੋਵੇਗਾ।

ਬੌਧਿਕ ਹੁਨਰ:

1. ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਸੋਚਣ ਸ਼ਕਤੀ ਵਿਚ ਵਾਧਾ ਹੋਵੇਗਾ।
2. ਅਲੋਚਨਾਤਮਕ ਰੁਚੀਆਂ ਪੈਦਾ ਹੋਣਗੀਆਂ।
3. ਵਿਦਿਆਰਥੀ ਕਿਸੇ ਵੀ ਵਿਸ਼ੇ ਦਾ ਗਹਿਨ ਅਧਿਐਨ ਕਰਨ ਦੇ ਕਾਬਿਲ ਹੋਣਗੇ।
4. ਕੋਈ ਵੀ ਸਾਹਿਤਕ ਰਚਨਾ ਦੇ ਕੇ ਉਸ ਵਿਚਲੇ ਵਿਸ਼ੇ ਨਾਲ ਸੰਬੰਧਿਤ ਪਰਤਾਂ ਉਜਾਗਰ ਕਰਨ ਦਾ ਹੁਨਰ ਵਿਕਸਿਤ ਕੀਤਾ ਜਾਵੇਗਾ।

ਅਮਲੀ ਹੁਨਰ:

1. ਇਸ ਪ੍ਰੋਗਰਾਮ ਦੇ ਜਰੀਏ ਪ੍ਰਾਪਤ ਕੀਤੇ ਗਿਆਨ ਨੂੰ ਵਿਦਿਆਰਥੀ ਵੱਖ-ਵੱਖ ਖੇਤਰਾਂ ਵਿਚ ਲਾਗੂ ਕਰ ਸਕਦੇ ਹਨ।
2. ਸਾਹਿਤ ਸਿਰਜਣ ਦੀ ਰੁਚੀ ਪੈਦਾ ਹੋਵੇਗੀ।
3. ਆਪਣੀ ਮਾਂ ਭਾਸ਼ਾ (ਪੰਜਾਬੀ) ਦੇ ਵਿਕਾਸ ਵਿਚ ਅਹਿਮ ਯੋਗਦਾਨ ਪਾਉਣਗੇ।

ਵਿਸ਼ੇ ਨੂੰ ਵਿਹਾਰਿਕ ਪੱਧਰ ਤੇ ਵਰਤਣ ਦਾ ਹੁਨਰ:

ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਵਾਰਤਕ ਵਿਚਲੇ ਲੇਖਾਂ ਦਾ ਗਹਿਨ ਅਧਿਐਨ ਕਰਕੇ ਵਿਦਿਆਰਥੀ ਉਸਾਰੂ ਸੋਚ ਅਤੇ ਪਾਰਦਰਸ਼ੀ ਨਜ਼ਰੀਏ ਨਾਲ ਸਮਾਜ ਵਿਚ ਵਿਚਰਣ ਦੇ ਯੋਗ ਹੋਣਗੇ। ਨਾਟ ਕਲਾ ਦੇ ਜਰੀਏ ਵਿਦਿਆਰਥੀ ਨਿੱਜੀ ਅਤੇ ਸਮਾਜਿਕ ਮਸਲਿਆ ਪ੍ਰਤੀ ਸੁਚੇਤ ਹੋਣਗੇ ਅਤੇ ਸਮਾਜ ਨੂੰ ਵੀ ਜਾਗਰੂਕ ਕਰਨ ਦੇ ਕਾਬਿਲ ਹੋਣਗੇ।

ਕੋਰਸ ਦਾ ਨਾਂਮੁੱਢਲੀ ਪੰਜਾਬੀ

ਕਲਾਸਬੀ ਏ/ਬੀ ਐੱਸ ਸੀ/ਬੀ ਕੇਮ ਬੀ ਸੀ ਏ/ਬੀ ਐੱਸ ਈ ਆਈ ਟੀ/

ਬੀ ਵੇਕ/ਬੀ ਐੱਮ ਐੱਮ/ਬੀ ਜੇ ਐੱਮ ਸੀ

ਸਮੇਸਟਰਪਹਿਲਾ

ਕੋਰਸ ਦਾ ਉਦੇਸ਼

- * ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਪੜ੍ਹਨੀ ਅਤੇ ਲਿਖਣੀ ਸਿਖਾਉਣੀ
- * ਵਿਆਕਰਣ ਦੀਆਂ ਬਾਰੀਕੀਆਂ ਬਾਰੇ ਦੱਸਣਾ
- * ਪੰਜਾਬੀ ਸਾਹਿਤ ਬਾਰੇ ਜਾਣਕਾਰੀ ਪ੍ਰਦਾਨ ਕਰਨਾ
- * ਸਾਹਿਤਕ ਰੁਚੀਆਂ ਪੈਦਾ ਕਰਨਾ
- * ਸੰਵਾਦ ਰਚਾਉਣ ਦੇ ਯੋਗ ਬਣਾਉਣਾ

ਕੋਰਸ ਨਾਲ ਹੋਣ ਵਾਲੀਆਂ ਪ੍ਰਾਪਤੀਆਂ ਦੀਆਂ ਸੰਭਾਵਨਾਵਾਂ

(ੳ) ਬੌਧਿਕ ਹੁਨਰ

- * ਸ਼ੁੱਧ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਲਿਖਣ ਅਤੇ ਪੜ੍ਹਨ ਦੇ ਯੋਗ ਹੋਣਾ
- * ਵਿਆਕਰਨ ਬਾਰੇ ਗਹਿਰਾਈ ਨਾਲ ਜਾਣਕਾਰੀ ਹੋਣਾ
- * ਮੁਹਾਵਰੇ ਅਤੇ ਅਖਾਣ ਦਾ ਅੰਤਰ ਪਤਾ ਹੋਣਾ
- * ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀਆਂ ਸਾਹਿਤਕ ਕਿਰਤਾਂ ਦੀ ਜਾਣਕਾਰੀ ਹੋਣਾ

(ਅ) ਅਮਲੀ ਹੁਨਰ

- * ਮਾਤ ਭਾਸ਼ਾ ਪ੍ਰਤੀ ਸਤਿਕਾਰ ਦੀ ਭਾਵਨਾ
- * ਵਿਆਕਰਨ ਦੇ ਨਿਯਮ ਸਮਝਣ ਦੀ ਯੋਗਤਾ
- * ਸ਼ੁੱਧ ਭਾਸ਼ਾ ਪੜ੍ਹਨ ਅਤੇ ਲਿਖਣ ਦੀ ਯੋਗਤਾ
- * ਈ-ਸਰੋਤਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਹੋਣਾ

(ੲ) ਵਿਸ਼ੇ ਨੂੰ ਵਿਹਾਰਕ ਪੱਧਰ 'ਤੇ ਵਰਤਣ ਦਾ ਹੁਨਰ

- * ਸ਼ੁੱਧ ਸੰਚਾਰ ਕਰਨ ਦੀ ਯੋਗਤਾ
- * ਟੀਮ ਵਰਕ ਦੀ ਯੋਗਤਾ
- * ਚੰਗੀ ਲੀਡਰਸ਼ਿਪ ਦੀ ਯੋਗਤਾ
- * ਸਮਸਿਆਵਾਂ ਨੂੰ ਸਮਝਣ ਅਤੇ ਹੱਲ ਕਰਨ ਦੀ ਯੋਗਤਾ

Course Name: Rehabilitation, Organization and Administration

Programme : Bachelor of Physiotherapy(BPT) 1st year

Objectives of the Course:

- This course aims at acquainting students about rehabilitation, disability, Community Based Rehabilitation, Role of N.G.Os in rehabilitation of the persons with disabilities, Basic principles of administration and finance, Orthotics, Prosthetics. Common disorders of speech and hearing – etiology, clinical features, assessment and principles of management.
- Principles in the management of vocational problems, including evaluation and vocational goals for people with disability.
- Principles of rehabilitation Nursing, including function of Nursing personnel and Nursing practice in rehabilitation.
- Identification, assessment and classification of mentally subnormal.
- Etiology and principles of management including prevention.
- Rehabilitation of the mentally subnormal, including vocational training & a home education programme.
- Definition, scope & importance of Activities of Daily Living (ADLs).
- The teaching and training of (a) wheel chair activities, (b) bed activities (c) transfer activities (d) Locomotor activities (e) self care activities, such as toilet, eating, dressing etc.
- Principles of occupational therapy including evaluation and goals for people with disability.

Course Outcomes:

A. 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.
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- know how to define 1. Conceptual framework of rehabilitation, roles of rehabilitation team members, definitions and various models of rehabilitation, Epidemiology of disability with emphasis on locomotor disability, its implications –individual, family, Social, economic and the state. Preventive aspects of disability and organizational skills to manage it. Community Based Rehabilitation and out reach programmes to rehabilitate persons with disabilities living in rural areas. Statutory provisions, Schemes of assistance

to persons with disability .Role of N.G.Os in rehabilitation of the persons with disabilities. Basic principles of administration and finance including personnel management and budget preparation and procurement etc.

- understand and explain the basic 1. Principles of Orthotics – types, indications, contra-indications, assessment (check out), uses and fitting – region wise, Fabrication of simple splints and self help devices for upper and lower extremity –indications and application ,Principles of Prosthetics – types, indications, contra-indications, assessment (check out),uses and fitting – upper and lower extremity.
- Common disorders of speech and hearing – etiogenesis, clinical features, assessment and principles of management. Principles in the management of vocational problems, including evaluation and vocational goals for people with disability.
- Principles of rehabilitation Nursing, including function of Nursing personnel and Nursing practice in rehabilitation. Identification, assessment and classification of mentally subnormal. Etiogenesis and principles of management including prevention. Rehabilitation of the mentally subnormal, including vocational training & a home educationprogramme. Definition, scope & importance of Activities of Daily Living (ADLs). The teaching and training of (a) wheel chair activities, (b) bed activities (c) transfer activities(d) Locomotor activities (e) self care activities, such as toilet, eating, dressing etc.
- Principles of occupational therapy including evaluation and goals for people with disability.

D. Transferable Skills :

Students will be able to

-use language more effectively.

Course Name: Problem Of Drug Abuse: Management And Prevention

Programme : Bachelor of Physiotherapy(BPT) 1st year

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.

Course Outcomes:

C. 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.

Paper: Pathology and Microbiology

Programme : Bachelor of Physiotherapy(BPT) IInd year

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.

Course Outcomes

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

Knowledge and understanding

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

Intellectual (Cognitive/Analytical) skills

- 1) To making understanding easier about how diseases begin.
- 2) To understand the fundamental cellular and tissues responses to pathologic stimuli.
- 3) 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.

Course Name: Pharmacology

Programme : Bachelor of Physiotherapy(BPT) IInd year

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 Outcomes:

D. Knowledge and Understanding):

- E. To understand Pharmacology as a basic and applied source
- F. To delineate the essential information about drugs.
- G. 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

Course Name: Electrotherapy – II

Programme : Bachelor of Physiotherapy(BPT) IInd year

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 pharmacotherapeutic 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 Outcomes:

H. 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.

C. 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.

Course Name: Exercise Therapy - II

Programme : Bachelor of Physiotherapy(BPT) IInd year

Unit -1

Objective-

This course offers the use of exercises to promote awareness about normal posture and poor posture. It also aim 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, etiogenesis, management, including therapeutic exercises.

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

Gait – Overview of normal gait & its components.

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

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

Learning Outcome

A. 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 gaitenergy requirement, kinetics and kinematics of the trunk and upperextremity 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 -2

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 -3

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

- 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

B. 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, stress or

Unit -4

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 -5

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

- Students will be 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.

Unit -6

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

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.

- 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.

Course Name: Biomechanics

Programme : Bachelor of Physiotherapy(BPT) IInd year

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 Outcomes:

I. 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 Antereo - 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

Course Name: PSYCHOLOGY

Programme : Bachelor of Physiotherapy(BPT) IInd year

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.

Course Outcomes:

B. 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

Course Name: Environmental Studies

Programme : Bachelor of Physiotherapy(BPT) IInd year

Objectives of the Course:

This course aims to develop concern and to acquaint students with information related to environment. Its main objective is to develop concern in each individual to save the environment. Its main aim is to create awareness about sustainable development. It also works to spread awareness among the students on issues like Global warming, Climate change, Depletion of Natural resources, Declining water table and Pollution etc. Its ultimate aim is to create GREEN INDIA CLEAN INDIA.

Course Outcomes:

C. Knowledge and Understanding:

Students will

- Know multidisciplinary nature of Environmental studies its scope and importance.
- Understand and explain the various natural resources, Ecosystems, Environmental Pollutions and their control measures.
- Understand various Social issues, like Global warming, Acid rain, Climate change and disaster management.

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

- identify the various Environmental problems and their possible solutions.
- analyze various social issues and their possible solutions
- analyze different types of Pollution and their control measures.

C. Practical Skills

Students will learn to:

- Plant tree species, Flowering species, vegetative propagation etc.
- Solid waste management (segregation of solid waste, disposal methods etc).
- Do Composting, Vermicomposting.

- Do disaster management.

D. Transferable Skills:

Students will be able to

- Manage solid waste, electronic waste, agriculture waste effectively in the society.
- learn to think more creatively to increase forest cover by Rotational cutting pattern.
- display better hygienic conditions in Society.

Course Name: General Medicine

Programme : Bachelor of Physiotherapy(BPT) IIIrd year

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.

Course Outcomes:

A. 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.

B. 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.

Course Name: Orthopaedics

Programme : Bachelor of Physiotherapy(BPT) IIIrd year

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.

Course Outcomes:

D. 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.

Course Name: Physiotherapy in Orthopedic conditions (PTO)

Programme : Bachelor of Physiotherapy(BPT) IIIrd year

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 Outcomes:

E. 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.

Course Name: Physiotherapy in Medical Condition-I

Programme : Bachelor of Physiotherapy(BPT) IIIrd year

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 Outcomes:

F. 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.

D. 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.

Course Name: Research Methodology and Biostatistics

Programme : Bachelor of Physiotherapy(BPT) IIIrd year

Objectives of the course

This course aims to introduce the student to the principles of epidemiology, research and statistical methods. It will acquaint the student with basic tools necessary to effectively design, implement and review research projects.

Course Outcomes

A. Knowledge and understanding:

The students will

- Learn to categorize research studies
- Design a study
- Learn to measure and analyze data
- Understand principles of conducting ethical research
- Understand concepts of hypothesis testing, p values, descriptive statistics
- Learn the effect of sample size and statistical power
- Learn statistical tools

B. Intellectual skills :

Students will learn about

1. Importance of research in physiotherapy
2. How to conduct research
3. What is research proposal
4. How findings are interpreted using statistical tools

C. Practical skills:

Students will learn about

1. Data collection
2. Review the literature
3. Selection of statistical tool
4. Interpretation of results

D. Transferable skills:

Students would be able to transfer the knowledge of research in their project work and in research work at later stage.

Subject: Neurology

Programme : Bachelor of Physiotherapy(BPT) IIIrd year

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 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

Subject: General Surgery

Programme : Bachelor of Physiotherapy(BPT) IVth year

Objectives of the course

- To teach the principles and skills underlying the recognition and management of the infection, injuries and surgery.
- Acquisition of the clinical application of basic knowledge of the surgery and infectious disease
- Development of clinical problem-solving skills.

Course Outcomes

This course aims at acquainting students with the concepts of infection, injuries and surgery in relation to Physiotherapy and providing them knowledge about the management of the above mentioned problems and procedures.

Course Name: Community Physiotherapy & Rehabilitation

Programme : Bachelor of Physiotherapy(BPT) IVth year

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 Outcomes:

A. 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

B. 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.

C. 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

D. Transferable Skills :

Students will be able to:

- Assess various occupational related musculoskeletal disorders.
- Assess various nutritional disorders in child and maternal health.

Course Name: Pediatrics & Geriatrics

Programme : Bachelor of Physiotherapy(BPT) IVth year

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 Outcomes:

G. 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.

B. 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.

C. 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.

D. 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

Course Name: PT in Medical Conditions-II
Programme: Bachelor of Physiotherapy(BPT) IVth year

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 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.

Course Name: Physiotherapy in Surgical Conditions

Programme: Bachelor of Physiotherapy(BPT) IVth year

Unit-I

Objective-This sections 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

Course Name: COMPUTER APPLICATIONS

Programme : Bachelor of Physiotherapy(BPT) IVth year

Objectives of the Course:

The objective of course is to enhance the practical knowledge of hardware, software, various components, operational skills of common computer applications, including word processing & spread sheet software.

Course Outcomes:

H. Knowledge and Understanding:

Students will

- Understand the Meaning of the various components of a personal computer.
- Understand the working knowledge of hardware and software
- Understand the a basic knowledge of utility of multi – media

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

- Identify the various components of a personal computer.
- Know the software and hardware.
- Think critically regarding the utility of web surfing for their research purpose in their medical field.

C. Practical Skills

Student will learn to

- Perform the Practical aspect of various components of computers.
- Know the common computer applications.
- Utility the skills of web surfing.

D. Transferable Skills:

Students will be able to

- Do their researches work in their respective field easily
- Know about the basic components of computer
- Know about the multimedia and there different uses in their field .

