

SEMESTER-1

Bachelor of Physiotherapy

Paper code- 03060101

Anatomy -1 (Theory)

Teaching Hours: 64

Periods/Week Credits

L: 4 T: 0 4

Max Marks: 100

Internal: 40

60

Duration of Examination: 3 Hrs

Bachelor of Physiotherapy

Paper code- 03060101

Anatomy -1 (Practical)

Teaching Hours: 64

Periods/Week Credits

P: 4 T: 0 2

Max Marks: 50

Internal: 20

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Course Description:

The study of anatomy will include identification of all gross anatomical structures. Particularly emphasis will be placed on description of bones, joints, muscles, the brain, cardio pulmonary and nervous system, as these are related to the application of physiotherapy and occupational therapy in patients.

Course Objectives:

The objective of this course is that after 128 hrs of lectures, demonstrations, and practical, the student will be able to demonstrate knowledge in human anatomy as needed for the study and practice of physiotherapy and occupational therapy. In addition the student will be able to fulfill with 75% accuracy (as measured written & oral internal evaluation) the following objectives of the course.

Course Outcomes:

- A. To understand the basics terminology and various anatomical structures of the body.
- B. To understand the bones, joints, muscles, vascular and nerve supply of upper limb.

- C. To understand the various parts of brain and spinal cord with its pathways and vascularity of brain.
- D. To understand the bones, joints, muscles, vascular and nerve supply of head and neck.
- E. To understand the routes and functions Cranial nerves.

Date	Theme/ Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	General Anatomy, Anatomical terminology, Cell and tissues	24	SIS Handbook Human Anatomy- B. D. Chaurasia	Describe basic terminology of the anatomy , study the structure and function of cell and tissues
	Introduction to upper limb	40	SIS, Demonstration of dissected part, bones B D Chaurasia's. Human Anatomy- Upper limb & Thorax Inderbir Singh- Textbook of Anatomy. Textbook of Anatomy with color Atlas-Inderbir Singh.	Demonstrate all bones of upper limb. Explain gross anatomy of pectoral region, axilla, back ,scapula arm, forearm and hand. Discuss Joints of upper limb, Details of median, ulnar and radial Nerves Describe the Surface Anatomy
	Neuroanatomy	30	SIS Demonstration of dissected part, bones B D Chaurasia's. Human Anatomy- Head & Neck Inderbir Singh- Textbook of Anatomy. Textbook of Anatomy with color Atlas-Inderbir Singh. Richard S. Snell- Clinical Anatomy.	Explain the Classification of nervous system , structure of spinal nerve, Meninges of the brain and Cerebrospinal fluid, blood supply
	Head and Neck	24	SIS Demonstration of dissected part, bones	Explain in brief outline of the osteology of the head and neck Explain the anatomy of

			<p>B D Chaurasia's. Human Anatomy- Head & Neck</p> <p>Inderbir Singh- Textbook of Anatomy.</p> <p>Textbook of Anatomy with color Atlas-Inderbir Singh.</p>	<p>the anterior and posterior triangle of the neck</p> <p>Explain the gross anatomy of larynx, pharynx, temporomandibular joint with their applied anatomy and cover anatomy of facial muscles in brief. Explain in brief the parotid region, submandibular region, temporal and infratemporal regions. Explain the contents of vertebral canal</p>
	Cranial Nerves	10	<p>SIS</p> <p>Demonstration of dissected part, bones</p> <p>B D Chaurasia's. Human Anatomy- Head & Neck</p> <p>Inderbir Singh- Textbook of Anatomy.</p> <p>Textbook of Anatomy with color Atlas-Inderbir Singh.</p> <p>Richard S. Snell- Clinical Anatomy.</p>	<p>Describe the brief outline of the anatomy and Identify the importance of applied anatomy of the cranial nerves</p>

Bachelor of Physiotherapy

Paper code-03060102

Physiology -1 (Theory)

Teaching Hours: 64

Periods/Week Credits

L: 4 4

Max Marks: 100

Internal: 40

Bachelor of Physiotherapy

Paper code- 03060102

Physiology -1 (Practical)

Teaching Hours: 64

Periods/Week Credits

P: 4 2

Max Marks: 50

Internal: 20

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Course Description:

The course is designed to assist the students to acquire knowledge of the normal human Physiology of various body systems and understand the alternation in physiology in disease and practice of Physiotherapy as applicable for each systemic disorder.

Course Objectives

The objective of this course is that after lectures, demonstrations, practical and clinics the student will be able to demonstrate an understanding of elementary human physiology.

Course Outcomes:

1. To understand the basic function of Cell and its morphology.
2. To understand the basic function and composition of Blood.
3. To understand the basic physiology of Respiratory system.

4. To understand the basic physiology of digestive system.
5. To understand the basic physiology of Muscular system and its contraction mechanism

Date	Theme/ Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	Cell structure and function	16 Hrs.	SIS Explain using charts, models slides, specimen and films Textbook of Physiology-A K Jain Concise medical physiology Dr. S.C. Choudhary	Describe the physiology of cell, tissues, Membranes and glands.
	Blood-composition,	28 Hrs.	SIS, Explain using charts, models slides, specimen and films. Demonstration the blood cell count Estimation of Hemoglobin determination of BT & CT, Blood grouping & ESR. W.B.C. count, RBC count & indices of Blood & DLC. Textbook of Physiology-A K Jain Concise Medical physiology Dr. S.C. Choudhary	Describe the physiology of blood as applicable to various component of blood and should be able to carry out various hematological examination.
	Respiratory system-	30 Hrs.	SIS, Explain using charts, models and films. Determination of lung, volume & capacities by spirometry. Auscultation of breath sounds. Textbook of Physiology-A K Jain Essentials of Medical Physiology- K Sembulingam	Describe the physiology and mechanism of respiration Understand the control of respiration and Able to do clinical examination of Respiratory system
	Gastro intestinal system	14 Hrs.	SIS, Explain using, charts films Textbook of Physiology-A K Jain	Describe the physiology of digestive system.

			Concise medical physiology Dr. S.C. Choudhary	
	Muscle and Nerve	40 Hrs.	SIS. Explain using, charts films. Textbook of Physiology-A K Jain Essentials of Medical Physiology- K Sembulingam	Describe the contraction and tone of muscles, Explain chemical & mechanical activities taking place in muscles & Nerves

Bachelor of Physiotherapy

Paper code- 03060103

Biochemistry-1

Teaching Hours: 64

Periods/Week Credits

100

L: 3 T:1 4

Max Marks:

Internal: 40

Course Description:

This course is designed to develop a basic knowledge of biochemical changes in the body of various enzymes, lipids, proteins and carbohydrates.

Course Objectives:

The objective of the course is that after 64 hours of lectures, the students will be able to understand the biochemical change of the various elements of the body at cellular level and extra cellular level.

Course Outcomes:

1. To understand biochemical basis of life sciences
2. To understand the metabolism, function and mechanism of action of various elements of the body.
3. To understand the transport system of electron and its effects on body.

Date	Theme/Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	BIOPHYSICS:	7	Student Interactive Session Explain using charts and models Biochemistry by U. Satyanarayana II Edition Textbook of Medical Biochemistry-S.K. Das	Describe about ionic balance

			Gupta	
	CELL & SUB CELLULAR ORGANELLES	7	Student Interactive Session Explain using charts and models Biochemistry by U. Satyanarayana II Edition Textbook of Medical Biochemistry-S.K. Das Gupta	Identify about biochemical importance of cell structures.
	CARBOHYDRATES -	10	Student Interactive Session Explain using charts and models Biochemistry by U. Satyanarayana II Edition Textbook of Medical Biochemistry-S.K. Das Gupta	Explain brief outline of carbohydrates & Understand its importance
	LIPIDS-	10	Student Interactive Session Explain using charts and models Biochemistry by U. Satyanarayana II Edition Textbook of Medical Biochemistry-S.K. Das Gupta	Explain brief outline of lipids & Understand its importance
	PROTEINS-	10	Student Interactive Session Explain using charts and models Biochemistry by U. Satyanarayana II Edition Textbook of Medical Biochemistry-S.K. Das Gupta	Explain brief outline of proteins & Understand its importance
	ENZYMES-	10	Student Interactive Session Explain using charts and models Biochemistry by U. Satyanarayana II Edition Textbook of Medical Biochemistry-S.K. Das Gupta.	Explain role of enzymes ,types and Understand its importance with specific focus to muscle function
	BIOENERGETICS	10	Student Interactive Session Explain using charts. Biochemistry by U. Satyanarayana II Edition Textbook of Medical Biochemistry-S.K. Das Gupta.	Explain about biochemical changes in the cell with specific focus on muscle function

Bachelor of Physiotherapy
Paper code- 03060104
Electrotherapy-1(Theory)

Teaching Hours: 64
Max Marks: 100

Periods/Week **Credits**
L: 4 **4**

Internal: 40
Duration of Examination: 3 Hrs

Bachelor of Physiotherapy
Paper code- 03060104
Electrotherapy-1(Practical)

Teaching Hours: 64

Periods/Week **Credits**
50
P: 4 **2**

Max Marks:

Internal: 20

Course Description:

In this course the student will learn the principles, technique, and effects of basic electrotherapy as a therapeutic modality in the restoration of physical function.

COURSE OBJECTIVES

The objective of this course is that after the student will be able to recall the basic principles of Physics related to electricity, electromagnetic spectrum and construction and working of

common electrical devices used in Electrotherapy modalities and to list the indications and contra indications of basics types of electrotherapeutic modalities, demonstrate the different techniques, and describe their effects.

Course Outcomes:

1. To have an overview of electrical supply in the Physiotherapy department
2. Able to demonstrate the techniques of application of Heat and Cold for the therapeutic purposes.
3. Able to demonstrate the techniques of application of different types of radiations for the therapeutic purposes
4. Able to select the appropriate dosages of different electromagnetic radiations to achieve the desired goals.

Date	Theme/ Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	Introductory Physics	36 Hrs.	Student Interactive Session Chart & Models Students Seminar Clayton's electrotherapy theory and practice IX Edition by Angela Forester Nigel Palastanga Electrotherapy Simplified: Basant Kumar Nanda Electrotherapy explained Principles and practice III Edition by John Low & And Reed	Describe the basic of Electromagnetic spectrum and laws governing radiation, Explain the basics of electrical energy, Describe the electrical supply of Electrotherapy modalities. Identify the dangers of AC/DC and precaution should be taken Explain the basic of magnetism, Identify the importance of Electromagnetic induction in the Physiotherapy Department
	Common devices used in electrotherapy modalities	20 Hrs.	Student Interactive Session Model Presentation Edition by Angela Forester Nigel Palastanga Electrotherapy Simplified: Basant Kumar Nanda Principles and practice III Edition by John Low & And Reed	Understand the working of different devices used in Electrotherapy Modalities for examples Condenser, Milliammeter, Voltmeter, Transformer, Chokes coils, Thermionic valve, Potentiometer, Fuse
	Superficial	20 Hrs.	Student Interactive Session	Describe the various

	Heat		Practical Demonstration Poster Presentation Group Discussion Edition by Angela Forester Nigel Palastanga Electrotherapy Simplified: Basant Kumar Nanda Principles and practice III Edition by John Low & And Reed Therapeutic heat and cold by Lehmann.	superficial heating agents. Explain the physiological and therapeutic effects of heat Identify the indication and contraindication of heat therapy Demonstration of Application of different heating modalities.
	Cryotherapy	12 Hrs.	Student Interactive Session Group Discussion Poster Presentation Practical Demonstration Edition by Angela Forester Nigel Palastanga Electrotherapy Simplified: Basant Kumar Nanda Principles and practice III Edition by John Low & And Reed Therapeutic heat and cold by Lehmann.	Explain Cryotherapy, Explain the physiological and therapeutic effects of Cold Identify the indication and contraindication of Cryotherapy Describe different methods of application of Cryotherapy.
	Mechanical Pressure	12 Hrs.	Student Interactive Session Poster Presentation Practical Demonstration http://ewma.org/fileadmin/ user_upload/EWMA.org/ Position_documents_2002- 2008/Compression.pdf https://www.sigvaris.com/ global/en/knowledge/ principles-compression- therapy?language=it	Explain the mechanism of action of Mechanical pressure in prevention and reduction of Oedema. Explain the physiological and therapeutic effects of Mechanical pressure Identify the indication and contraindication of Pre4ssure application Demonstration of different method of application of compression therapy
	Actino therapy	28 Hrs.	Student Interactive Session Students Seminar Poster Presentation Practical Demonstration	Identify different types of electromagnetic rays to be used for therapeutic purposes –UVR, IRR & LASER.

			Edition by Angela Forester Nigel Palastanga Electrotherapy Simplified: Basant Kumar Nanda Principles and practice III Edition by John Low & And Reed Principle and practice of Electrotherapy by Joseph Kahn. Electrotherapy: Clinics in physical therapy- Wolf.	Describes the Wavelength, frequency, types & sources of generation, Demonstrate the techniques of irradiation, Explain the physiological and therapeutic effects, indications, contraindications, Describe the depth of penetration, Calculate the dosimetry, Illustrate the precautions, Achieve the operational skills of equipments and patient preparation in the following:
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Bachelor of Physiotherapy

Paper code- 03060105

Sociology

Periods/Week Credits

32

L:2 2

Teaching Hours:

Max Marks: 50

Internal Marks:20

Duration of Examination: 3 Hrs

Course Description:

This course is to design to develop the basic knowledge of Sociology with respect to different society and its relation towards health and Physiotherapy treatment.

Course Objectives:

The objective of the course is that after 32 hours of lectures, the students will be able to demonstrate an understanding of the role of socio-cultural factors as determinants of health and behaviour in health and sickness. They will be able to relate this to therapeutic situations in the practice of physiotherapy. In addition, the student will be able to show their proficiency based on written and internal evaluation.

Course Outcomes:

1. Understand the role of family and community in the development of behaviors.
2. Develop a holistic outlook toward the structure of society and community resources.
3. Identify the subtle influence of culture in the development of human personality, the role of beliefs and values as determinants of individual and group behaviors.
4. Understand the social and economical aspects of community that influence the health of the people.
5. Learn to assess the social problems and participate in social planning.
6. Identify social institutions and resources.
7. Understand the significance of social interactions in the process of rehabilitation.
8. Appreciate the role of therapist as a member of society and the interdependence between individuals and society

Date	Theme/Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	Introduction to Sociology	3 Hrs	Student Interactive Session Megee- sociology'- Drydonpressclilinois.	Describe the theory of Sociology and illustrate its role in building sociological knowledge. Understand the Sociology as a science of society Discuss the Uses of the study of sociology Apply the Sociological Knowledge in Physiotherapy
	Sociology & health	3 Hrs	Student Interactive Session Psychology and sociology - Applied to Medicine - Porter & Alder - W. B.Saunders.	Explain the relationship between sociological factors and health of an individual. Identify the Social factors affecting health status. Understand the Social consciousness and perception of illness. Understand the Social consciousness and meaning of illness. Identify the Institution of health of the people
	Socialization	2 Hrs	Student Interactive Session	Describe impact of sociology in hospital setting and in

			Megee- sociology'- Drydonpressclilinois.	rehabilitation.
	Social Group	2 Hrs	Student Interactive Session Megee- sociology'- Drydonpressclilinois.	Explain types the Concept of social group. Understand the role of primary groups and secondary groups in the hospitals and rehabilitation setting
	Family	3 Hrs	Student Interactive Session Group Discussion Megee- sociology'- Drydonpressclilinois.	Describe the importance of family and its influence on individuals' health and associated diseases Identify the effect of sickness on family, and psychosomatic disease
	Community	2 Hrs	Student Interactive Session Gihnsberg- Principles of sociology-sterling publications.	Understand the Concept of community Explain the Role of rural and urban communities in public health Role of community in determining beliefs, practices and home remedies in treatment.
	Culture	3 Hrs	Student Interactive Session Kupuswamy- Social Changes in India -Vikas, Delhi	Describe the role of culture as social consciousness in moulding the perception of reality.
	Caste system	2 Hrs	Student Interactive Session Gihnsberg- Principles of sociology-sterling publications.	Explain the caste system and its trends in society.
	Social change	2 Hrs	Student Interactive Session Kupuswamy- Social Changes in India -Vikas, Delhi	Describe Social change and its effect on health and society. Describe social planning and its influence on society and its health.
	Social control	3 Hrs	Student Interactive Session Kupuswamy- Social Changes in India -Vikas, Delhi	Explain the Meaning of social control, Understand 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.
	Social problems of the disabled	3 Hrs	Student Interactive Session Group Discussion Julian- Social Problem-Prentice hall. Ahuja- Social problems-Bookhive, Delhi	Describe of various Social problems and explain their remedies.
	Social Security	2 Hrs	Student Interactive Session Gihnsberg- Principles of sociology-sterling publications.	Describe various Social legislatures for differently able persons.
	Social Worker	2 Hrs	Student Interactive Session Megee- Sociology'-Drydonpressclilinois.	Explain Social worker and its role on society.

Bachelor of Physiotherapy

Paper code- 03060106

Basic Computer-Practical

Teaching Hours: 64

Periods/Week Credits

P: 4 T: 0 2

Max Marks: 50

Internal: 20

Course Description:

This Course describes –Basic Operation of Computer, Various Input and Output devices, Secondary Storage Devices, Detailed study of Components of CPU and Introduction to MS Word, MS Power point, MS Excel

Course Objectives:

The course is designed to create awareness among the students about basic operation of Computer.

Course Outcomes:

At the end of the session students would be able understand the basic operation of computer and creating the documents, power point presentation and making spreadsheets in Excel along with the formulas.

Date	Theme/ Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	Basics of Computer	16	Student Interactive Session Practical demonstrations of the Word processing software. Introduction to Computer- Renu Kapoor	Explain the basics of various components of a personal computer like Input devices, Output devices, secondary storage device and components of CPU Explain the working of Word pad.
	Hardware and Software	16	Student Interactive Session Practical demonstrations of the Word processing software. Introduction to Computer- Renu Kapoor	Describe working of hardware and software and Explain the working of MS power point to prepare presentation
	Multimedia	16	Student Interactive Session Practical demonstrations of the Word processing software. Introduction to Computer- Renu Kapoor	Explain the basics of utility of multi- media.
	Operating system	16	Student Interactive Session Practical demonstrations of the Word processing software. Introduction to Computer- Renu Kapoor	Develop basic knowledge of Linux, Unix, DOS, Windows OS

Bachelor of Physiotherapy

Paper code- 03060107

English

Teaching Hours: 32

Periods/Week Credits

50

T: 2 T: 0 2

Max Marks:

Internal: 20

Course Description:

The course is designed to enable students to enhance ability to comprehend spoken and written English, required for effective communication in their professional work.

Course Objectives:

The objectives of this course are to write grammatically correct English, to develop writing skills, to understand and express meaningfully the prescribed text.

Course Outcomes:

- Student able to comprehend spoken and written English for effective communication
- Develop writing skills

Date	Theme/Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	Communication Skills (Listening)	10 hours	Student Interactive Session Audio-video clippings followed by exercises	Develop Communication Skills (Listening) in terms of the following: <ul style="list-style-type: none"> • Speech • Active listening Understand the Importance of Communication
	Conversation Skills	10 Hours	Student Interactive Session Group Discussion Interview	Develop Conversation Skills in terms of the following: <ul style="list-style-type: none"> • Greetings and Introducing oneself • Framing questions and answers • Role play • Buying: asking details etc • Interviews • Note Making
	Reading Comprehension	12 Hours	Student Interactive Session Group Discussion Simple narration and Stories Newspaper and articles clippings	Develop the Reading Comprehension in terms of following: <ul style="list-style-type: none"> • Sentence types, Clause and phrase • Vocabulary building: Antonyms, Synonyms, Affixation, Suffixation, One word substitution • Phrasal Verb and Idioms • Word formation strategies

Bachelor of Physiotherapy

PAPER CODE- FBS_OE_1

Positive Psychology and Mindfulness

Teaching Hours: 32

Periods/Week Credits

50

T: 2 T: 0 2

Max Marks:

External: 40

Internal: 10

Course Objectives:

Psychology has traditionally focused on dysfunction—people with mental illness or other issues—and how to treat it. Positive psychology, in contrast, is a field that examines how ordinary people can become happier and more fulfilled. In this course psychology is looked from a positive perspective. Happiness, resilience, gratitude, positive affects, optimism, hope etc. buffer

people from the deleterious effects of depression etc. A discussion of mindfulness, flow, and spirituality is framed as search for optimal experiences.

Date	Theme/Topic	Duration	Learning Experiences & Learning Resources	Learning Objectives
	Psychology and Positive Perspective	9 Hrs	<p>Power Point presentation by teacher, SIS, FGD, Teacher’s seminar Seligman, M.E.P. & Csikszentmihalyi, M. (2000). Positive Psychology: An Introduction. Special Issue of American Psychologist, APA, USA. DOI: 10.1037/0003-066X.56.1.89</p> <p>Synder, C.R., Lopez, S.J. & Pedrotti, J.T. (2011). Positive Psychology – The Scientific and Practical explorations of human strengths (Second edition) Sage publications India Pvt. Ltd.</p>	<p>Understand the meaning of Positive Psychology, Explain Eastern and Western perspective on positive psychology Identify measure of strengths Understand the importance of Living well – Resilience in childhood, positive youth development and successful aging</p>
	Positive Emotional States and Processes	10 Hrs	<p>PowerPoint presentation by teacher, SIS, FGD</p> <p>Seligman, M.E.P. & Csikszentmihalyi, M. (2000). Positive Psychology: An Introduction. Special Issue of American Psychologist, APA, USA. DOI: 10.1037/0003-066X.56.1.89</p>	<p>Explain the Principles of pleasure, understanding of positive affect, positive emotions, happiness and wellbeing Describe Positive states and processes- self efficacy, optimism and hope, Wisdom and courage</p>
	Mindfulness, Flow and Spirituality	13	<p>Power Point presentation by teacher, SIS, FGD Seligman, M.E.P. & Csikszentmihalyi, M. (2000).</p> <p>Positive Psychology: An Introduction. Special Issue of American Psychologist, APA, USA. DOI: 10.1037/0003-066X.56.1.89</p>	<p>Understand the importance of Mindfulness as a state of mind Living with mindfulness Explain Flow: In search of absorption Explain Spirituality: In search of the sacred</p>

