GOKUL GLOBAL UNIVERSITY
Approved By Govt. of Gujarat
(Recognized by UGC under Section 22 & 2(f) of 1956)
(Gujarat Private State University Act 4 of 2018)

COURSE STRUCTURE

Bachelor of Physiotherapy

FACULTY OF PARAMEDICAL
GOKUL PHYSIOTHERAPY COLLEGE
University Campus, State Highway-41, Siddhpur - 384151, Dist. Patan, Gujarat, INDIA
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PROGRAMMEOUTCOME

(BPT)

After successful completion of the program, an individual will be able to:

PO1 KNOWLEDGE: Apply the concepts of Anatomy, physiology and kinesiology in professional Physiotherapy Practice and select various exercise therapies and Electrotherapeutic techniques for prevention and Treatment of various conditions

PO2 LEARNING SKILLS: Reflect knowledge on assessment planning, implementation in physiotherapy practice requiring for individual rehabilitation.

PO3 PROFESSIONAL ETHICS: Achieve moral principles and values that out to guide the professionalism, ethics, and integrity in their interaction with patients, colleagues, and the community.

PO4 ANALYTIC SKILLS: Critically evaluate research literature, apply evidence- based practices, and contribute to the advancement of physiotherapy through research.

PO5 SOCIAL AWARENESS: Demonstrate the impact of physiotherapy knowledge on the society by participate in interdisciplinary collaboration, effectively contributing to a patient-centered approach to healthcare.

PO6 LIFE LONG LEARNING: Demonstrate a commitment to professional growth and lifelong learning to promote absorption and adoption of new knowledge and tools.

PROGRAMMESPECIFICOUTCOME

(BPT)

1. Work effectively in various inter professional collaborative settings like hospitals, Rehabilitation Centers, Special Schools, Educational Institutions, Health and Fitness Centers, Geriatric Centers, Ergonomic Consultant in Corporate Sectors, Private Consultation, Home Care Services, Industrial Sectors, Sports Management, Fitness Consultant

2. Promote health education and improved quality of life through the practice of the profession.

YEAR WISE DISTRIBUTION OF HOURS AND CREDITS

First Year

HUMAN ANATOMY (FPB110101)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
125	175	300	80	20	80	20	100	100

HUMAN PHYSIOLOGY (FPB110102)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
150	150	300	55	15	80	20	70	100

BIO-CHEMISTRY

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
40	-	40	25	5	-	-	30	-

PSYCHOLOGY (FPB110103)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	40	10	-	-	50	-

SOCIOLOGY

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	40	10	-	-	50	-

EXERCISETHERAPYI & SOFT TISSUE MANIPULATION (FPB110104)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
150	150	300	80	20	80	20	100	100

BIOMEDICAL PHYSICS (FPB110105)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
100	50	150	40	10	-	-	50	-

PROFESSIONAL PRACTICE &ETHICS (FPB110106)

(Not for University Exam)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
20	-	20	-	-	-	-	-	-

COMPUTER APPLICATIONS (FPB110107)

(Not for University Exam)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
40	-	40	-	-	-	-	-	-

ENGLISH (FPB110108)

(Not for University Exam)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
50	-	50	-	-	-	-	-	-

ENVIRONMENTAL SCIENCES (FPB110109)

(Not for University Exam)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
50	-	50	-	-	-	-	-	-

Second Year

PATHOLOGY (FPB120101)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	40	10	-	-	50	-

MICROBIOLOGY

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	40	10	-	-	50	-

PHARMACOLOGY(FPB120102)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	40	10	-	-	50	-

EXERCISETHERAPY-II (FPB120103)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
160	150	310	80	20	80	20	100	100

KINESIOLOGY(FPB120104)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
90	-	90	40	10	-	-	50	-

PSYCHIATRY (FPB120105)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	40	10	-	-	50	-

ELECTROTHERAPY (FPB120106)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
160	150	310	80	20	80	20	100	100

MISCELLANEOUS MEDICINES (FPB120107)

1.1 RADIOLOGY

(Not for University Exam)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
10	-	-	-	-	-	-	-	-

1.2 ENT

(Not for University Exam)

Teaching Scheme (Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
10	-	-	-	-	-	-	-	-

1.3 OPTHALMOLOGY
(Not for University Exam)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
10	-	-	-	-	-	-	-	-

ALLIED THERAPEUTICS (FPB120108)
(Not for University Exam)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
40	-	-	-	-	-	-	-	-

RECENT TRENDS (FPB120109)

(Not for University Exam)

1.4 PROFESSIONAL PRACTICE &ETHICS

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
10	-	-	-	-	-	-	-	-

Third Year

MEDICINE-I (FPB130101)

GENERAL MEDICINE

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
80	-	80	55	15	-	-	70	-

SKIN&V.D. (DERMATOLOGY)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
30	-	30	25	5	-	-	30	-

MEDICINE-II(FPB130102)
NEUROLOGY

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	55	15	-	-	70	-

PAEDIATRICS

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
50	-	50	25	5	-	-	30	-

SURGERY (FPB130103)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
50	-	50	55	15	-	-	70	-

OBSTETRICS AND GYNECOLOGY

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
40	-	40	25	5	-	-	30	-

PHYSICAL & FUNCTIONALDIAGNOSIS(FPB130104)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
120	100	220	80	20	80	20	100	100

ORTHOPADICS (FPB130105)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
120	-	120	80	20	-	-	100	-

1.1 ORTHOPADICS(NON-TRAUMATIC)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
120	-	120	80	20	-	-	100	-

PREVENTIVE & SOCIALMEDICINE (FPB130106)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory (T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
70	-	70	40	10	-	-	50	-

RECENTTRENDS(FPB130106)

Teaching Scheme(Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical(P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
40	-	40	-	-	-	-	-	-

Fourth Year

PHYSIOTHERAPYINNEUROLOGICALCONDITIONS(FPB140101)

Teaching Scheme (Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical (P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
120	20	140	80	20	80	20	100	100

PHYSIOTHERAPYINMUSCULO-SKELETALCONDITIONS(FPB140102)

Teaching Scheme (Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical (P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
120	20	140	80	20	80	20	100	100

PHYSIOTHERAPY IN CARDIO RESPIRATORY & MEDICAL SURGICAL CONDITIONS(FPB140103)

Teaching Scheme (Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical (P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
100	20	120	80 (55+25)	20 (15+5)	80	20	100	100

COMMUNITYPHYSIOTHERAPY REHABILITATIONAND ASSISTIVE TECHNOLOGIES(FPB140104)

Teaching Scheme (Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical (P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
60+30	20	110	80 (55+25)	20 (15+5)	80	20	100	100

ETHICS AND MANAGEMENT (FPB140105)

Teaching Scheme (Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical (P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
20+20	-	40	40	10	-	-	50	-

BIO-STATISTICS&RESEARCHMETHODOLOGY (FPB140106)

Teaching Scheme (Hours)			Evaluation Scheme(Marks)					
Lecture	Practical	Total	Theory(T)		Practical (P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
50	-	50	40	10	-	-	50	-

COURSECONTENTS

FIRSTYEARB.P.TSYLLABUS

HUMANANATOMY(FPB110101)

OBJECTIVES:

Attheendofthecourse, thestudentwillbeableto:

1) Acquiretheknowledgeofstructureofhumanbodyingeneral.
2) Understandtheregionalanatomyindetail
3) age
4) Understandhistologicalfeaturesofvariousorgans
5) Understanditsapplicationinmedicalscience

SYLLABUS:-

1. GENERALANATOMY

a) Introduction&anatomicalterms
b) Skin,SuperficialFascia&deepfascia
c) CVS,Portalsystem,collateralcirculation&arteries
d) Lymphaticsystem
e) Osteology
f) Myology
g) Syndesmology(joints)
h) Nervoussystem

2.MYOLOGY,OSTEOLOGYANDARTHROLOGY

a) Fascia&musclesofscalpandface
b) Musclesofmastication
c) Temporomandibularjoint
d) Musclesoforbit&relatednerves
e) Superficialandlateralcervicalmuscle
f) (platysma,trapezius,SCM)
g) Anteriortriangleofneck-suprahyoid&infrahyoid

h) Anteriorandlateralvertebralmuscles
i) Cervicalplexus
j) Cranialnerve(7th&8th)
k) Cranialnerve(9th,10th,11th,12th)
l) Suboccipitaltriangle&suboccipitalmuscles
m) Jointsofvertebralcolumntocranium
n) Musclesofthoraxandmovementofrespiration
o) Jointsofthoraxincludingsternochondral&chondrocostaljoints
p) Musclesofabdomen
q) Musclesofpelvis
r) Musclesofperineum
s) Vertebraljoint
t) Jointsofpelvis(lumbosacral,sacrococcygeal,pubicsymphysis)
u) Deepmusclesofback
v) Musclesconnectingupperlimbtovertebralcolumnwithregionalstructures
w) Scapularmusclesincludingregionalstructures
x) Musclesofarm
y) Axillaandbrachialplexus
z) Jointsofshouldergirdlea
a) Shoulderjoint
bb) Anterior antebrachial muscles (front of forearm) with regional structurecc)
Posteriorantebrachialmuscles(backofforearm)withregionalstructuresdd) Elbowjoint &cubital fossa
ee) Radioulnarjoint(superior,middleandinferior)
ff) Theretinacula,fasciaandsynovialsheathofwristandhandgg)
Musclesofhand
hh)Radiocarpal/wrist joint
ii) Otherjointsofhand
jj)
Musclesconnectinglowerlimbtovertebralcolumnwithregionalstructureskk) Musclesofiliacregion(psoas muscle)and lumbarplexus
ll) Anteriorfemoralmuscles(frontofthigh)includingregionalstructures

mm)Medicalfemoralmuscles(adductorcompartment)includingregionalstructuresnn)Muscles ofglutealregion includingregionalstructures

oo)Posteriorfemoralmuscles(backofthigh)pp
)includingregional structures
qq)Hipjoint
rr)
Anteriorcruralmusclesincludingregionalstructuresss
) Lateralcruralmusclesincludingregionalstructures
tt)
Posteriorcruralmusclesincludingregionalstructuresu
u)Kneejoint
vv) Popliteal
fossaww)Musclesof
foot
xx)
Tibiofibularjoint(superior,middleandinferior)yy
) Talocruraljoint (ankle joint)
zz) Jointsoffoot&Arches)

3. NERVOUSSYSTEM

a) Introductiontonervoussystem&meanings
b) Spinalcord&peripheralnervesandvertebralcanal
c) Brainstem-1
d) Brainstem-2
e) Cerebellum
f) Diencephalonwithbasalganglia
g) Limbicsystemwitholfactoryregion
h) Cerebrum&functionalareas
i) Spinaltracts &overviewofCNS –I
j) Spinaltracts &overviewofCNS–II

4. RESPIRATORYSYSTEM

5. DIGESTIVESYSTEM

6. URINARYSYSTEM

7. ENDOCRINESYSTEM

8.REPRODUCTIVESYSTEM

9. SPECIALSENSORYORGANSANDSENSATIONS

10. CARDIOVASCULARSYSTEM(Heart&Vessels)

11. HISTOLOGY

a) Cell
b) Epithelia
c) Connectivetissue(general)
d) Cartilage
e) Bone
f) Muscles

g) Nerves
h) Bloodandphagocyticsystem
i) Lymphandlymphaticsystem
j) Bloodvessels
k) Skinanditsappendages
l) Centralnervoussystem

12. Generalembryology

a) Spermatogenesis
b) StructureofSpermatozoon
c) Oogenesis
d) Ovarianfollicle
e) Fertilization
f) Formationofgermlayers
g) Placentaldevelopment
h) Brachialarches
i) Developmentofskeletalsystem
j) Developmentofalltypemuscularsystem
k) Developmentoflocomotorsystem
l) Developmentofnervoussystem

Note:-

1. Dissectionofupperlimb,lowerlimb&Trunk.
2. Identificationofanterolateralabdominalwall,posteriorabdominalwall&thoraciccage.
3. Anatomicalposition&descriptionofallbones.
4. Surfacemarkingincadaverandlivingbody.
5. Radiologicalexaminationofupperlimb,lowerlimb&otherspecialX-rays.
6. InBRAIN:Identificationofallpartsandvarioussectionsatdifferentlevels.
7. InHISTOLOGYPRACTICAL:Identificationofbasictissuesofbody

TopicDistributionforPaperSetting	
Section	TopicSr.No.
I(40Marks)	1-6
II(40Marks)	7-12

Course Code	CourseName	CourseOutcome
FPB110 101	HUMANA NATOMY	CO1: Identify the major anatomical structures of the human body, including bones, muscles, and organs. CO2: Explain the relationships between different anatomical structures and their functions in the human body systems. CO3: Demonstrate anatomical structures to interpret. CO4: Analyze anatomical variations and abnormalities, understanding their impact on overall health and potential diagnostic challenges.

HUMANPHYSIOLOGY(FPB110102)

OBJECTIVES:

Attheendoftheyearthestudentwillbeableto:

1) Acquiretheknowledgeoffunctionsofvarioussystemsofhumanbody
2) Understandtheroleofhormones,enzymes,andotherdifferenttypesofcellsofHumanbody.

SYLLABUS:-

1. GeneralPhysiology:

a) CellStructureandorganelle.
b) GeneralPrinciplesofBiophysics
c) BodyFluidcompartments.

2. Blood:

a) Compositionofblood,Plasma,proteinformationandtheirfunction.
b) Structure,formationandfunctionsofR.B.C.
c) Structure,formationandfunctionsW.B.Cs.andPlatelets.
d) Coagulationanditseffectsonbleeding,clottingtime.
e) Bloodgroupsandtheirsignificance, Rh.factor.
f) Reticulo-Endothelialsystem,jaundice,structureandfunctionsofspleen.
g) HaemoglobinandE.S.R.

3. CardiovascularSystem:

a) Structure,propertiesofheartmuscleandnervesupplyofheart,Structureandfunctionofarteries,arterioles,capillaries andveins.
b) Cardiaccycleandheartsounds.
c) Cardiacoutputmeasurement&affectingfactors
d) Heartrateanditsregulation,cardiovascularreflexes.
e) Bloodpressure,itsregulationsandphysiologicalvariations.
f) Peripheralresistance,Factorscontrolling,RoleinB.P.

g) Haemorrhage.
h) Changesinmuscularexercise.

4. RespiratorySystem:

a) Mechanismofrespiration,Intra-pleuralandintrapulmonarypressure.
b) Lungvolumesandcapacities.
c) O2andCO2carriageandtheirexchangeintissuesandlungs.
d) Nervous chemical regulation of respiration - Respiratory Centres. Respiratory states - anoxia,asphyxia,Cyanosis, Acclimatization.

5. DigestiveSystem:

a) Generaloutlineandsalivarydigestion
b) Gastricsecretionanditsmechanismofsecretionandfunctions.
c) Digestion,absorptionandmetabolismofproteins.
d) Structure,SecretionsandFunctionsofLivers.

6. Nutrition:

a) Digestion,absorptionandmetabolismofcarbohydrates.
b) Digestion,absorptionandmetabolismoffats.
c) Digestion,absorptionandmetabolismofproteins.
d) Vitamins,sources,functionsandresources.
e) Balanceddietindifferentagegroupsandoccupation.

7. Endocrines:

a) AnteriorPituitary
b) PosteriorPituitaryandparathyroid.
c) Thyroid.
d) AdrenalCortex.
e) AdrenalMedulla,thymus.
f) PancreasandBloodsugarregulation.

8. ReproductiveSystem:

a) Sexdeterminationanddevelopment,puberty,

b) Malesexhormonesandtheirfunctions,spermatogenesis.
c) Femalesexhormonesandformationofurine,G.F.R.andTubularfunctions.
d) Pregnancy,functionsofplacentaandlactation.

9. ExcretorySystem:

a) Grossandminutestructureofkidneyandfeaturesofrenalcirculation.
b) Mechanismofformationofurine,G.F.R.andTubularfunction.
c) Renalfunctiontests.
d) Physiologyofmicturition

10.NeuroMuscularPhysiology:

A. MuscleandNerve:

1. Structureofneurones,membranepotentialandgenerationofactionpotential.
2. Nerveimpulseconduction,saltatoryconduction.
3. Nervemuscularjunctionanddrugsactingonit-Myasthenia.
4. DegenerationandregenerationinperipheralnervesincludingWalleriandegeneration

B. Muscle:

1. Type of muscles and their gross structure, stimulus, chronaxie, strength durationcurve.
2. StructureofSarcomere-basisofmusclecontraction,Starlingslaw,changesduringmuscle contraction.
3. Electrical-Biphasicandmonophasicactionpotentials.
4. Chemical,ThermalandPhysicalchanges,isometricandisotoniccontraction.
5. Motorunitsanditsproperties,clonus,tetanus,allornonelaw,beneficialeffect.
6. Natureofvoluntarycontraction,fatigue.

11.NervousSystem:

a) Typesandpropertiesofreceptors,typesofsensations
b) Structureofsynapse,reflexarcanditsproperties,occlusion,summation,subminimalfringeetc.
c) Tractsofspinalcord.
d) Descendingtracts,PyramidalandExtrapyramidal.

e) Hemisectionandcompletesectionofspinalcord.Upperandlowermotorneuronpanalysis.

f) Cerebralcortex,areasandfunctions-E.E.G.
g) Structure-connectionsandfunctionofcerebellum.
h) Basalgangliaandthalamus,connectionsandfunctions.
i) Reticularformation,tone,postureandequilibrium.
j) AutonomicNervoussystem.

12.SpecialSenses:

1. Broadfeaturesofeye,errorsofrefraction,lesionsofvisualpathways.
2. Speechanditsdisorders.
3. Earandvestibularapparatus.

Practical&Demonstrations:

Title

NerveMusclephysiology

1. GastrocnemiusMuscle-SciaticNervePrep.
2. ActionPotentialetc.
3. EffectofTemperatureonS.M.C
4. EffectofLoadonSkeletalMuscleContraction

Cardio-VascularSystem

5. Graph
6. BP
7. RadialPulse
8. Spirometry/RespiratoryEfficiencyTest

Instruments

RecordingBodyTemperatureHaematology

9. TotalredCellCount
10. TotalWhiteBloodCount
11. CellsinPeripheralbloodfilm
12. DifferentialWBCcount
13. Absolutecount,Arnethcount
14. BloodgroupingBleedingtime/ClottingTime,Blood,PCV,ESR

CentralNervousSystem

15. Examinationofsensoryfunction
16. Examinationofmotorfunctions
17. Examinationofreflexes
18. CranialnervesI,III,IV,V,VI
19. CranialnerveII
20. CranialnervesVII,VIII,IX,X,XII

Course Code	CourseName	CourseOutcome
FPB11 0102	HUMANPHYS IOLOGY	CO1: Discussfunctionsofvarioussystemsofhumanbody CO2: Understandtheroleofhormones,enzymes,andotherdifferenttypesofcellsofHumanbody. CO3: Explain the physiological mechanisms underlying homeostasis and the regulatory processes that maintain balance in the body. CO4: Describe the structure and function of the cell in brief.

BIO-CHEMISTRY

OBJECTIVES:

Attheendofthecourse thecandidate willbeableto

1. Describethe structureandfunctionofthecellinbrief.
2. Describethenormalfunctionsofdifferentcomponentsoffood.
3. Describebasalmetabolicrateandthefactorsaffectingthesame(inbrief)withspecialreferenceto obesity.
4. Discussnutritionalaspectsofcarbohydrates,lipids,proteins,vitaminsandmineralsandtheirmetaboli smwithspecial reference toobesity.
5. Define enzymes and discuss in brief the factors affecting enzyme activity and diagnostic useofenzymes.
6. Describeindetailthebiochemicalaspectsofmusclecontraction.
7. Acquire knowledge in brief about the clinical biochemistry, with special reference to liver andrenal function tests, blood study for lipid profile, metabolism of fat, carbohydrates, proteins,boneminerals,electrolytebalance,waterbalanceandacid–basebalance.

Content:

1. Biochemicalcharacteristicsoflivingmater.
2. Biochemistry,morphologyofcell
3. Nucleicacids.
4. Proteins.
5. Theenzymes.
6. Metabolism.
7. Hormones.
8. Nutrition.
9. Biochemistryofconnectivetissues,nervetissueandmuscle.
10. Water,electrolyteandacidbasebalance.
11. Chemistryofbiologymaterials.
12. PhysicochemicalPhenomenon.
13. Commonproceduresusedinbiochemistry.

TopicDistributionforPaperSetting	
Section	Topic Sr.No.
I (55Marks)	Physiology
II(25Marks)	Biochemistry

Course Code	CourseName	CourseOutcome
FPB110103	BIO-CHEMISTRY	CO1: Discussfunctionsofvarioussystemsofhumanbody CO2: Understandtheroleofhormones,enzymes,andotherdifferenttypesofcellsofHuman body. CO3: Explain the physiological mechanisms underlying homeostasis and the regulatory processes that maintain balance in the body. CO4: Describe the structure and function of the cell in brief.

PSYCHOLOGY(FPB110103)

OBJECTIVES:

Attheendofthecourse thecandidate willbeableto

1. Definethetermpsychologyanditsimportanceinthehealthdeliverysystemandgainknowledgeofpsychologicalmaturationduringhumandevelopmentandgrowthandalterationduringageingprocess.
2. Understand the importance of psychological status of the person in the health and diseases,environmentalandemotionalinfluence onthemindandpersonality.
3. Acquire the knowledge as to how to deal with the patient. Reference should be made wheneverappropriate to the therapist's relationship with the patient and with his professional colleagues.Emphasisshouldbelaidon theeffectsofdiseaseon thepatient'sbehavior.

SYLLABUS:-

1. Introduction:Introductionofpsychology,briefhistory,definitions,schoolsofpsychology
2. Biologicalfoundationsofbehaviour,hereditary,environmentandlogicalbasisfordevelopment,developmentalpsychology(child).
3. Learnedandunlearnedbehaviour:Simplelearningandconditioning,sociallearning.Learningdisabilityinchildren(counsellingforexercise)
4. Memory:Phasesofmemory,shorttermstorage,memoryandperceptionthinkingetc.Forgettingtestimonyandrecallofevents,memoryandageing
5. Perception:Sensorybasisofperception,attentionandperception,observererror
6. Motivation and Emotions: Approaches to motivations, emotional development, influence ofearlyexperience.Familyandsocialinfluencesonmotivationandbehaviour.ThematicApperception TestdevelopedbyAMMankadbasedonMaslowtheory.
7. ThinkingandIntelligence:Learningandproblemsolving,developmentofconceptualthinkinginchildren. Communication, language and thinking, Measurement of intelligence,influences onintelligence,extent andconsequenceofindividualdifference.
8. Tests:Wechslerscales,Standford-BinetIntelligencescale,Bender,andGestalt-otherprojectivetest,Anxietyscale.

9. Personality: Nature of personality structure and dynamics, dimensional, psycho analyticalandconstitutional theories of personality, measurement of personality, culture and personalitypatterns.
10. Attitude: Nature of attitudes and beliefs including prejudice, group influenceson attitudes,attitudechange,doctor-patientexpectationsandattitudes,prejudiceformationandreduction.
11. Interpersonal Behavior: Experimental analysis on social interaction, studies of the interviewsituation, behavior in formal and informal groups, group norms and roles. Leadership in formaland informal groups, group moral, Behavior therapy, behavior modification techniques, tokeneconomy.
12. Social Psychology: nature and scope of social psychology, socialinteraction, psychologicalgroups and their classification, socialization of the individual, social control (social heredity) -moves,customs,fashion,propagandaanditstechniques.
13. Stress:stressandresponses,disorders,copingwithstressors,fourmaxims,meditational yoga.
14. Pain:Physiologicalandpsychologicalfactors,typesofpain,painmeasurement.
15. Psychotherapy and counselling: Goals, Psychodynamic therapy, Humanistic therapy Behaviortherapy- Relaxation training (Jacobson training), Hypnosis, Biofeedback. Behavior modificationtherapies (BMT) – Operant conditioning techniques, Token economy, Classical conditioning,modelling techniques. Cognitive therapy- Elli's rational/ emotive therapy, Beck's cognitive,Meichenbaum'sself-instructionaltraining.

Course Code	CourseName	CourseOutcome
FPB110103	PSYCHOLOGY	CO1: Recall the key theories and principles in psychology and sociology, demonstrating knowledge of major concepts in both disciplines CO2: Understand psychological status of the person in the health and diseases, environmental and emotional influence on the mind and personality. CO3: Explain the underlying principles of psychological and sociological research methods CO4: Analyze different psychological and sociological perspectives, identifying patterns and connections between theories and their implications for understanding human behavior and society.

SOCIOLOGY

OBJECTIVES:

Attheendofthecourse thecandidate willbeableto

1. Definethetermsociologyanditsimportanceinthehealthdeliverysystem.
2. Understand the basic sociological concepts, principles and social process, social institution inrelation to the individual family and community and the various social factors affectingthefamilyintheruralandurbancommunitiesinIndia.Thesubjectwillintroducethestudentt othebasicsociologicalconcepts,principlesandsocialprocesses,socialinstitutionsinrelationtothein dividualfamily andcommunityand thevarioussocialfactorsaffectingthefamilyinruralandurbancommunities.

SYLLABUS:-

1. Introduction:

a. Meaning-Definitionandscopeofsociology.
b. Itsrelationwithanthropology,psychology,socialpsychologyandethics.
c. Methodsofsociology-Casestudy,socialsurvey,questionnaireinterviewandopinionpollmethods.
d. Importanceofitsstudywithspecialreferencetohealthcareprofessionals.

2. SocialfactorsinHealthanddisease:

Themeaningofsocialfactors,theroleofsocialfactorsin healthandillness.

3. Socialization:

a) Meaningandnatureofsocialization
b) Primary,secondaryandanticipatorysocialization
c) Agenciesofsocialization.

4. SocialGroups:

Conceptsofsocialgroupsinfluenceofformalandinformalgroupsonhealthandsickness.

Theroleofprimarygroupsandsecondarygroupsinthehospitalandrehabilitationsettings
.

a) Prostitution.
b) Alcoholism.
c) Problemsofwomeninemployment.

5. Family:

a) Thefamily
b) Meaninganddefinition
c) Functions
d) Types
e) Changingfamilypatterns
f) Influence of family on the individuals health, family and nutrition, the effects of sicknessonfamilyandpsychosomaticdiseaseandtheirimportancetophysiotherapy.

6. Community:

a) Ruralcommunity-Meaningandfeatures-Healthhazardsofruralities.
b) Urbancommunity-Meaningandfeatures-Healthhazardsofurbanities.

1. Community:

a) Ruralcommunity-Meaningandfeatures-Healthhazardsofruralities.
b) Urbancommunity-Meaningandfeatures-Healthhazardsofurbanities.

2. CultureandHealth:

a) Conceptofculture
b) Cultureandbehaviour.
c) Culturalmeaningofsickness.
d) CultureandhealthDisorders

3. SocialChange:

a) Meaningofsocialchanges.
b) Factorsofsocialchange.

c) Humanadaptationandsocialchange.
d) Socialchangeandstress
e) Socialchangeanddeviance.
f) Socialchangeandhealthprogramme.
g) Theroleofsocialplanningintheimprovementofhealthandinrehabilitation.

4. SocialProblemsofDisabled:

Consequencesofthefollowingsocialproblemsinrelationtosicknessanddisabilityremediestoprevent these problems.

a) Populationexplosion.
b) Povertyandunemployment.
c) Beggary.
d) Juveniledelinquency.
e) Prostitution.
f) Alcoholism.
g) Problemsofwomeninemployment.

5. **SocialSecurity:**
   Socialsecurityandsociallegislationinrelationtodisabled.

6. **SocialWorker:**
   Meaningofsocialwork.
   Theroleofamedicalsocialworker

7. **CultureandHealth:**
   a) Conceptofculture
   b) Cultureandbehaviour.
   c) Culturalmeaningofsickness.
   d) CultureandhealthDisorders

8. **SocialChange:**
   a) Meaningofsocialchanges.
   b) Factorsofsocialchange.
   c) Humanadaptationandsocialchange.
   d) Socialchangeandstress
   e) Socialchangeanddeviance.
   f) Socialchangeandhealthprogramme.
   g) Theroleofsocialplanningintheimprovementofhealthandinrehabilitation.

9. **SocialProblemsofDisabled:**

Consequencesofthefollowingsocialproblemsinrelationtosicknessanddisabilityremediestoprevent theseproblems.

   d) Populationexplosion.
   e) Povertyandunemployment.
   f) Beggary.
   g) Juveniledelinquency.

10. SocialSecurity:

Socialsecurityandsociallegislationinrelationtodisabled.

11. SocialWorker:

Meaningofsocialwork.

Theroleofamedicalsocialworker

TopicDistributionforPaperSetting	
Section	TopicSr.No.
I(40Marks)	Psychology
II(40Marks)	Sociology

Course Code	CourseName	CourseOutcome
FPB1 10103	SOCIOLOGY	CO1: Recall the key theories and principles in psychology and sociology, demonstrating knowledge of major concepts in both disciplines CO2: Understand psychological status of the person in the health and diseases, environmental and emotional influence on the mind and personality. CO3: Explain the underlying principles of psychological and sociological research methods CO4: Analyze different psychological and sociological perspectives, identifying patterns and connections between theories and their implications for understanding human behavior and society.

EXERCISETHERAPYI&SOFTTISSUEMANIPULATION(FPB110104)

OBJECTIVES:

Attheendoftheyearthestudentwillbeableto

1. Understandthebasicmechanicalprinciplesandeffectofexercise,therapeuticmodalityintherestoration ofphysical function.
2. Describeandacquiretheskills ofapplicationand demonstrationoftheuseofvarioustoolsofthetherapeuticgymnasiumandvariousstartingandderivedpositions.
3. Describe the physiological and therapeutic effect of various movements and demonstrate invariousanatomical planes.
4. Acquiretheskillsofapplicationofvariousmassagemanipulationsanddescribethephysiological effects,therapeuticuses, merits–demeritsofthesame.
5. Demonstrateandacquiretheskillofrelaxation.

SYLLABUS:-

1. Introductiontoexercisetherapy.
2. Physiologicaleffectsandusesofexercise.
3. Useofapparatusinexercisetherapy.
4. Fundamentalstartingpositions, derivedpositions-effectsanduses,pelvis tilt&Muscleworkforallpositions
5. Jointmovement-terminologyandrangeaxesandplanesofmovement,levers,measurementof jointmovements,goniometry,typesofgoniometer,bubble andgravitygoniometer.
6. Causesofrestrictionofrangeofmovement-Distinguishbetweenskin,muscles,Capsularcontractures.
7. Classificationofmovements
8. Active movements - Definition, types, techniques, effects and uses. Passive movements - Definition, types, techniques of relaxed passive movements and uses, comparison of bothmovements.
9. Group work-Criteria of selection of patients, advantages and disadvantages of group classexercises.
10. Homeexercises-trickmovements.

1. Suspension therapy - definitions of suspension and point of suspension, types of suspension,pulleys and use of pulleys in suspension therapy, application of suspension therapy either toincreasethejointrangeortoincrease musclepower.
2. Breathing-Mechanismofbreathing(normal),Musclesofrespiration,changesinthoraciccageduringprocess ofrespiration
3. PursedlipbreathingGlossopharyngealBreathing-significance.
4. Normalgaitcycle –Phases ofgait
5. Crutch walking - Types of crutch walking, Use of parallel bars in pre-crutch walking stage,balance exercises, phase of walking, gait training, group of muscles responsible during crutchwalking.
6. Progression in crutch walking, measurement of crutches, other walking aids canes,walkers,tripodsothertypesofcrutches,crutch-walkingonevensurface,slopes,climbingupthestaircase.
7. Measurementoflimblength,methodsofmeasurements.
8. Application of resistance to develop endurance and power, progression of exercises angle ofpull,typesofmusclework,exercises-freeresisted,assisted-useofgadgetapparatus.esistedExercises - Techniques and types of resistance, SET system (Heavy resisted exercises) Oxfordmethod,Delorme method,Macqueen'smethod.
9. Free Exercises - Classification, technique, effects of free exercises - application for shoulder,neck,hipandkneejoints,techniquesofmobilization for stiff joints.
10. Maintenanceofrecord-volume,rangeofmotion,resistance,limblength.

6.2SOFTTISSUEMANIPULATION

11. Introduction-briefhistory,definition,classification.
12. Physiologicaleffectsandtherapeuticuses,contra-indications.
13. Preparationofpatient,basicpointstobeconsideredbeforeandduringmassageprocedure.
14. Technique,effectsandusesofeachmanipulationandcontra-indications.
15. Specificeffectsofcertainmanipulations.
16. Massageforarm,leg,neckandupperbackface.

17. Massageforedema,scar,tendinitis,fibrosis(tightfascia)

18. Practiceofsofttissuemanipulationinsubjects.
19. Mobilizationofsofttissues,jointsandfluidcollection.

TopicDistributionforPaperSetting	
Section	TopicSr.No.
I(40Marks)	1-15
II(40Marks)	16-29

Course Code	**CourseName**	**CourseOutcome**
FPB110104	EXERCISETHERAPY I &SOFT TISSUEMANIPULATION	CO1: Memorize the fundamental principles of exercise therapy and soft tissue manipulation, including relevant anatomical structures and physiological responses. CO2: Describe application and demonstration of the use ofvarioustoolsofthetherapeuticgymnasiumandvariousstartingandderivedpositions. CO3: Apply exercise prescription to design personalized rehabilitation programs for individuals with specific musculoskeletal conditions, considering their unique needs and goals CO4: Explain the biomechanical and physiological effects of exercise therapy and soft tissue manipulation on the musculoskeletal system.

BIOMEDICALPHYSICS(FPB110105)

OBJECTIVES:

Attheendofthecoursethecandidatewillableto

1. Describethefundamentalsofgeneralphysicsandabletorelateitsapplicationinphysiotherapy
2. Understandbasicphysicalprinciplesof sound,lightandheatand theirapplicationinphysiotherapyfield
3. Understandbasicaspectsofelectricityandelectronicsasrelated toitsapplicationinelectrotherapyinstruments
4. Describeinbrief,certaincommonelectricalcomponentssuchascapacitors,transformers,valves &transistorsandwillbeableto identifysuchcomponents.

GeneralPhysics(Mechanics):

1. Force–Definition,unit,resolutionofforces.Newton'slawsofmotion.Typesofmotion, directionandquantityofmotion,Speed,Velocity,Work,EnergyandPower.
2. Force of gravity, centre of gravity, line of gravity and base. Axes and planesof movementandgravity,
3. Reaction forces, ground reaction force, Equilibrium, determination of equilibrium of a body,Inertia, Acceleration,MomentumandTorque
4. Friction–forceoffriction,staticanddynamicfriction,limitoffriction,frictionanecessityandevil.
5. Simple machine – Lever, mechanical advantage, angle of pull, pulley, wheel and axle, fixedandmovablepulley,pendulums,elasticity,springproperties ofspring
6. Fluidmechanics– Viscosity,definition,coefficientofviscosity,streamlineandturbulentflow,effect of temperature and pressure on viscosity. Principle of Archimedes, laws of floatation,hydrostatic pressure, buoyancy, surface tension, excess pressure in spherical liquefied drop.Physicalpropertyofwater.
7. Heat: Heat transfer, properties of thermal radiation, Specific heat, thermal capacity, Energyconversion,IandIIlawofthermodynamics,physicaleffectsofheat– expansion,evaporation,thermionicemissionetc.,Conceptofheatandtemperature,measureme

ntofheat

thermometry,thermometer.Methodofmeasuringbodytemperature.Humanbodytemperature. Biophysics ofsuperficialheatandcold.

8. Sound: Origin of sound, Characteristics of sound waves, velocity of sound in air and water,effectoftemperature,pressure,densityofmedium, humidity,windonsoundwaves.
9. Frequencies of sound waves, Infrasonic, Normal hearing band and Ultrasonics,Reflection,Refraction and Attenuation of Sound waves, Acoustic Impedance, Interference of soundwaves,Resonance, Echo,Doppler effectandFresnel and FraunhoferzonesinUltrasonics.
10. ElectromagneticSpectrum:ElectromagneticRadiation:LawsGoverningEMR,LawsofReflection, Refraction, Absorption, Cosine law, Attenuation, Inverse square law. Grothuslawetc.
11. Light: Emissionandabsorptionspectra.Electromagneticspectrum. Laws of transmission,reflection, refraction, absorption. Internal reflection and fibre optics, Interference of light.LASERand its application.

ElectricityandElectronics:

1. Structureofatom,Isotopes,Statesofmatter;Compoundformation-(covalentformation),
2. StaticElectricity:TheoriesofElectricity,ProductionofElectricCharge, CharacteristicofChargedbody,PotentialandCapacity,PotentialDifference.
3. Current Electricity: Energy sources for electricity, EMF, Resistance, Intensity, Ohm's Law,resistance in Series / Parallel, Devices for regulating Intensity(Types, Construction andworkingof Rheostat),Electricenergyandpower,ThermalEffectsofElectric(Joule'sLaw).
4. Magnetism: Nature, Type, Molecular Theory of Magnetism, Property of Magnet, MagneticEffect of Electric Current, Electromagnets, Milliamperemeter& Voltmeter (Construction andworking),Meters for measuringAc.
5. Capacitor / Condenser: Principles, Capacity (Measurement and factors determining), Typesand Construction, Electric field, lines of force and characteristics of lines of force, Chargingand discharging of the condenser, Duration of discharge, discharge throughinductance,capacitivereactance andusesofcondenser.
6. ElectroMagneticInduction:Principles(Faraday's/Lenz'slaw),Production,DirectionofInduced EMF, Strength of induced EMF, Types (Self and Mutual) and inductive reactance.EddyCurrents,Dynamo,Transformers(Functions,Types,Constrictions), Chokecoil.
7. ThermionicValves(DiodeandTriodes),Typesofrectification(Halfandfullwave–Voltage

halvingandWestinghouseBridge),Semi Conductors:Types,semiconductordiodes, Metalrectifier &Transistors,Integratedcircuits(IC),Picture Circuitryboards(PCB),

8. MainSupply:ProductionofElectricity,Types,Distribution,Earthing,TypesofPlugs&Switches.Fuse.

9. Electricandelectroniccircuits:Oscillatingcircuit,SmoothingCircuit,surgingcircuit,CRcircuit,multivibratorcircuit,faradiccoils(lewisjonesandsmartbristow),paneldiagramofelectricalstimulator, Productionofhighfrequencycurrentby klystron,magnetron
10. FrequenciesofCurrent– Low,MediumandHighfrequencycurrentsandtheircharacteristics,Biological Cell as a capacitor and resistor, frequency of current7 and its relation to capacitivereactance(resistance)
11. Types of current – DC and AC, Sources of DC,Necessity for rectification of AC, Use of DC as atherapeuticcurrentanditsdangers,ElectricalSkinResistance,Electrolysis,acidicandalkalinereactionsunderanodeandcathode,Electrolyticburnsanditsprevention
12. Shock:Types(ElectricShock,EarthShock),Definition,Severity,Effects,CausesandPrecautions.

Course Code	Course Name	CourseOutcome
FPB110105	BIOMEDICALPHYSICS	CO1: Describe fundamental principles of physics, particularly those relevant to the human body, including mechanics, electricity, and optics CO2: Explain the application of biomedical physics in diagnostic techniques such as medical imaging, understanding the underlying physical principles and technologies involved CO3: Apply biomedical physics to interpret data from medical instruments and imaging modalities, demonstrating the ability to troubleshoot and optimize equipment. CO4: Analyse the impact of various physical forces on the human body, such as the effects of biomechanics on joint movement and the role of physics in understanding physiological processes.

PROFESSIONALPRACTICE&ETHICS (FPB110106)

(NotforUniversityExam)

OBJECTIVES:

Attheendofthecourse thecandidatewillbeableto:

1. Beabletounderstandthemoralvaluesandmeaningofethics
2. Acquirebedsidemannersandcommunicationskillsinrelationwithpatients,peersseniorsandother professionals.

SYLLABUS:-

1. Introductiontothehistoryofphysiotherapy
2. Orientationtothecurriculum,clinicalareasandgeographicallocation
3. Conceptofmorality&ethics
4. Conceptofprofessionalismandprofessionaldresscode

COMPUTERAPPLICATIONS (FPB110107)

(NotforUniversityExam)

OBJECTIVES:

Thecourseenablesthestudentstounderstandthefundamentalsofcomputerandits basicapplications.

SYLLABUS:-

1. Introductiontodataprocessing:

a) Featuresofcomputers.WhatareHardwareandSoftware?
b) Advantagesofusingcomputers.Roleandusesofcomputers.Whatisdataprocessing?
c) Applicationareasofcomputersandcommonactivitiesindataprocessing.Typesofdataprocessing,characteristics ofapplication.

2. Hardwareconcepts:

a) Architectureofcomputers–characteristicsofdiscs,tapes,terminals,printers,network.
b) Typesofstoragedevices.
c) Concept of damage. Application of networking concept of PC system care, floppy care, data careetc.

3. Conceptofsoftware

a)Classificationofsoftware:Systemsoftware.Applicationofsoftware,OperatingSystem,ComputerSystem, computer virus, precautions against viruses, dealing with viruses, computers in medicalelectronics.

4. BasicanatomyofComputers:

a) Principlesofprogramming:Computerapplication–principlesinscientificresearch,workprocessing,medicine,libraries,museum,education, informationsystem.
b) Dataprocessing
c) EMG,Exercisetestingequipment,Laser.

ENGLISH (FPB110108)

(NotforUniversityExam)

CourseOutline:ThecourseisdesignedtohelpAcquireagoodcommandandcomprehensionofthe Englishlanguage throughindividualpapers andconferences.

SYLLABUS:-

1. Introduction:

a) Studytechniques
b) Organizationofeffectivenotetakingandlogicalprocessesofanalysisandsynthesis.
c) Useofthedictionary
d) Enlargementofvocabulary
e) Effectivediction

2. AppliedGrammar:

a) Correctusage
b) Thestructureofsentences
c) Thestructureofparagraphs
d) Enlargementofvocabulary

3. Writtencomposition:

a) Precisewritingandsummarizing
b) WritingofBibliography
c) Enlargementofvocabulary

4. ReadingandComprehension:

Reviewofselectedmaterialsandexpressoneselfinone'swordsandenlargementofvocabulary.

5.Thestudyofvariousformsofcomposition:

Paragraph,essay,letter,summary,practiceinwriting

6.VerbalCommunication:

Discussionsandsummarization,debates,oralreports,useinteaching.

ENVIRONMENTALSCIENCES (FPB110109)

(NotforUniversityExam)

1:Multidisciplinarynatureofenvironmentalstudies

a) Definition,scopeandimportance
b) Needforpublicawareness.

2:NaturalResources:

Renewableandnon-renewableresources:

Naturalresourcesandassociatedproblems.

a) Forestresources:Useandover-exploitation,deforestation,casestudies.Timberextraction,mining,damsandtheireffectsonforestandtribal people.
b) Waterresources:Useandover-utilizationofsurfaceandgroundwater,Floods,drought,conflictsoverwater,dams-benefitsandproblems.
c) Mineralresources:Useandexploitation,environmentaleffectsofextractingandusingmineralresources,casestudies.
d) Foodresources:Worldfoodproblems,changescausedbyagricultureandovergrazing,effectsofmodernagriculture,fertilizer-pesticideproblems,waterLogging,salinity,casestudies.
e) Energyresources:Growingenergyneeds,renewableandnon-renewableenergysources,useofalternateenergysources. Casestudies.
f) Landresources:Landasaresource,landdegradation,maninducedLandslides,soilerosionanddesertification.
g) Roleofanindividualinconservationofnaturalresources.
h) Equitableuseofresourcesforsustainablelifestyles.

Unit 3:Ecosystems

a) Conceptofanecosystem.
b) Structureandfunctionofanecosystem.
c) Producers,consumersanddecomposers.

d) Energyflowintheecosystem.
e) Ecologicalsuccession.

f) Foodchains,foodwebsandecologicalpyramids.

4 :Biodiversityanditsconservation

a) FromUnsustainabletoSustainabledevelopment
b) Urbanproblemsrelatedtoenergy
c) Waterconservation,rainwaterharvesting,watershedmanagement
d) Resettlementandrehabilitationofpeople;itsproblemsandconcerns.CaseStudies
e) Environmentalethics:Issuesandpossiblesolutions.
f) Climatechange,globalwarming,acidrain,ozonelayerdepletion,nuclear
g) Accidentsandholocaust.CaseStudies.
h) Wastelandreclamation.
i) Consumerismandwasteproducts.
j) EnvironmentProtectionAct.

g) Introduction,types,characteristicfeatures,structureandfunctionoftheFollowingecosystem:-
   - Forestecosystem
   - Grasslandecosystem
   - Desertecosystem
   - Aquaticecosystems(ponds,streams,lakes,rivers,oceans,estuaries)

5 :Biodiversityanditsconservation

a) Introduction–Definition:genetic,speciesandecosystemdiversity.
b) BiogeographicalclassificationofIndia
c) Valueofbiodiversity:consumptiveuse,productiveuse,social,ethical,aestheticandoptionvalues
d) Biodiversityatglobal,Nationalandlocallevels.
e) Inidaasamega-diversitynation
f) Hot-sportsofbiodiversity.
g) Threatstobiodiversity:habitatloss,poachingofwildlife,man-wildlifeconflicts.
h) EndangeredandendemicspeciesofIndia

i) Conservationofbiodiversity:In-situandEx-situconservationofbiodiversity.

6 :EnvironmentalPollution

a) Definition,Cause,effectsandcontrolmeasuresof:-
b) Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermalpollution,nuclearhazards
c) SolidwasteManagement:Causes,effectsandcontrolmeasuresofurbanandIndustrialwastes .
d) Roleofanindividualinpreventionofpollution.
e) Pollutioncasestudies.
f) Disastermanagement:floods,earthquake,cycloneandlandslides.

7 :SocialIssuesandtheEnvironment

a) Air(PreventionandControlofPollution)Act.
b) Water(PreventionandcontrolofPollution)Act
c) WildlifeProtectionAct
d) ForestConservationAct
e) Issuesinvolvedinenforcementofenvironmentallegislation.
f) Publicawareness.

8:HumanPopulationandtheEnvironment

a) Populationgrowth,variationamongnations.
b) Populationexplosion–FamilyWelfareProgramme.
c) Environmentandhumanhealth.
d) HumanRights.
e) ValueEducation.
f) HIV/AIDS.
g) WomenandChildWelfare.
h) RoleofInformationTechnologyinEnvironmentandhumanhealth.
i) CaseStudies.

9:Fieldwork

a) Visitto alocal area to documentenvironmentalassetsriver/forest/grassland/hill/mountain
b) Visittoalocalpollutedsite-Urban/Rural/Industrial/Agricultural
c) Studyofcommonplants,insects,birds.

Studyofsimpleecosystems-pond,river,hillslopes,etc.

SECONDYEARBACHELOROFPHYSIOTHERAPY

1.PATHOLOGY(FPB120101)

OBJECTIVES:

Attheendofthecourse thecandidatewillbeableto:

1. Acquire the knowledge of concepts of cell injury and changes produced thereby indifferenttissuesandorgans; capacityofthebodyinhealingprocess.
2. Recall the etio-pathogenesis, the pathological effects and the clinical-pathologicalcorrelationofcommon infectionand non-infectiousdisease.
3. Acquire the knowledge of concepts of neoplasia with reference to the etiology, grossand microscopic features, diagnosis and prognosis in different tissues and organs ofthebody.
4. Correlate normal and altered morphology of different organ systems in differentDiseases needed to understand the disease process and their clinical significance (withSpecialemphasistoneuro-musculoskeletalandcardiovascular–respiratorysystem).
5. Acquireknowledgeofcommonimmunologicaldisordersandtheirresultanteffectson Thehumanbody.
6. Understandinbrief,aboutthehematologicaldiseasesandinvestigationsnecessarytoDiagnosethem anddeterminetheirprognosis.

GeneralPathology:

1. Introduction: Aims and objects of study of pathology, definitions of health, disease,causesofdisease, methodsofstudyofdisease.
2. Inflammation–Generalmorphology,types,phenomenonofacuteinflammation.
3. Tissuerepair–Woundhealing,fracture,skin,nerves,muscles
4. CellInjury–Degeneration,physicalandchemicalirritants,ionizingradiations,cellulites.
5. Disturbanceofcirculation–edema,thrombosis,infarction,embolism.
6. Necrosis,Gangrene
7. Growthanditsdisorders–atrophyandhypertrophy(pseudo),Hyperplasia
8. Cellularageing
9. Tumors–definitions,classification,characteristicsofbeingandmalignanttumors,etiologyand spread oftumors,systemiceffects.

10. Infection–Acute,chronic,includingAIDS.
11. Blood-Anemia,definition,classification,etiology,labinvestigations,bloodpicture;

Hemorrhagicdisorders–causesandclassification(hemophilia)

12. Immunity,HypersensitivityandAutoimmunedisorders(RA,SLE)Sys temicPathology:

(Eachconditioninthissectionistobetaughtunderthespecificheadingsof Causes, Development,GrossandMicroscopiconly).

1. Respiratory System: Pneumonia, Bronchitis, Bronchiectasis, Asthma,Emphysema,TuberculosisandCarcinomaofLungsOccupationalLungDise ases
2. Cardiovascular System: Rheumatic Heart diseases, Myocardial infarction,Atherosclerosis and other disease of blood vessels – TAO, Buerger's diseases,Thrombophlebitis,CongenitalHeartdiseases,
3. AlimentarySystem:PepticUlcer,Ulcerativelesionsofintestine
4. Liver:Hepatitis,Cirrhosis
5. CNS:Meningitis,Encephalitis,CerebralHemorrhage,CVA,BriefoutlineofCNSTum ors
6. PeripheralNerves:Neuritis,Neuralgia,GBS,Neuropathies.
7. Bones and Joints: Osteomyelitis, Osteoarthritis, Septic, Arthritis, Gout,Osteomalacia,BoneTumorsbriefly*- GiantCelltumor,Osteosarcoma,Ewing's
8. Muscles:DisorderofmusclesincludingPoliomyelitisandMyopathies, Volkman'sIschaemiccontracture
9. Skin:Scleroderma,Psoriasis,Autoimmunedisorders
10. UrinarySystem:Nephritis,GlomerularNephritis,NephroticSyndrome
11. EndocrineSystem:Thyroid–ThyroiditisandThyroidtumors,Diabetes

CourseCode	Course Name	CourseOutcome
FPB120101	PATHOLOGY	CO1: Acquire concepts of cell injury and changes produced thereby in different tissues and organs; capacity of the body in healing process. CO2: Discuss the etio-pathogenesis, the pathological effects and the clinical-pathological correlation of common infection and non-infectious disease. CO3: Recall the major pathological conditions and microbial agents, demonstrating knowledge of basic concepts in pathology and microbiology. CO4: Apply pathology and microbiology to analyze clinical cases, recognizing patterns of disease and identifying appropriate diagnostic tests.

2.MICROBIOLOGY

OBJECTIVES:

Attheendofthecoursethecandidatewillbeabletohavesoundknowledge oftheagentsresponsible for causing human infections pertaining to CNS, CVS,musculoskeletalandRespiratorysystem.

1. GeneralBacteriology:
   a) Introduction,historicalbackground,classificationofmicro–organisms
   b) Morphologyofbacteria
   c) Stainingofbacteria
   d) Sterilization
   e) Cultivationandculturemedia
2. SystemicBacteriology:
   a) Gram-Positivecocci–Streptococci,Pneumococci,Staphylococci
   b) Gram-NegativeCocci–GonoandMeningococci
   c) Gram-PositiveBacilli
   d) Gram-NegativeBacilli-Typhoid,Cholera,Dysentry
   e) Aerobic-Diptheria,T.B.,Leprosy
   f) Anaerobic-Tetanus,GasGangrene,Botulism
3. Immunology:
   a) Immunity,Antigens
   b) Antibodies,Ag-AbReaction
   c) Agglutination,precipitation
   d) Hypersensitivityreactions
4. GeneralVirology:

a) Poliomyelitis
   b) Rabies
   c) Demonstrationoftestin:diagnosisofAIDS,HepatitisandSyphilis
5. Parasitology:
   a) Malaria
   b) Amoebiasis
   c) Roundwormandloopworm
6. Mycology:
   a) Candidiasis
   b) Ringworm
   c) Scabies
7. Aseptic universal precautions & practicesBiomedical waste and universalprecautions

TopicDistribution

TopicDistributionforPaperSetting	
Section	**Topic Sr. No.**
I(40 Marks)	Pathology
II(40 Marks)	Microbiology

Course Code	CourseName	CourseOutcome
FPB120101	MICROBIOLOGY	CO1: Acquire concepts of cell injury and changes produced thereby in different tissues and organs; capacity of the body in healing process. CO2: Discuss the etio-pathogenesis, the pathological effects and the clinical- pathological correlation of common infection and non-infectious disease. CO3: Recall the major pathological conditions and microbial agents, demonstrating knowledge of basic concepts in pathology and microbiology. CO4: Apply pathology and microbiology to analyze clinical cases, recognizing patterns of disease and identifying appropriate diagnostic tests.

3.PHARMACOLOGY(FPB120102)

OBJECTIVES:

Attheendofthecourse thecandidate willbeableto

1. Describe pharmacological effects of commonly used drugs by patients referred forphysiotherapy; list their adverse reactions, precautions to be taken, contraindications,formulationand rootofadministration.
2. Identify whether the pharmacological effect to the drug interferes with the therapeuticresponseofphysiotherapyandvice versa
3. Indicatetheuseofanalgesicsandanti-inflammatoryagentswithmovementdisorders,withconsiderationof costefficiencyandsafetyforindividualneeds.
4. Gettheawarenessofotheressentialandcommonlyuseddrugsbypatients.Thebasisoftheir useandcommonas wellasseriousadverse reaction.

Syllabus:

1. Chemicalcharacterandgeneralactionofdrugs
2. Principles of drug administration and routes of administration, distribution,metabolism,excretionofdrugs,factorsinfluencingdrugreaction,dosageand factorsmodifyingit.
3. Drugtoxicityincludingallergyandidiosyncrasy.
4. Definition,action,indication,contraindication,adversereactionofthefollowing:
   a) DrugsactingasPNS:stimulatingandinhibiting,cholinergicandanticholinergics. DrugsactingatNMjunction.Musclerelaxants
   b) DrugsactingonCNS:Analgesics,antipyretics,narcotics,antiinflammatory,antiepil eptic, sedatives, hypnotics, tranquilizers, anticonvulsants, stimulants,psychotherapeutics,alcohol
   c) Pulmonaryeffectsofgeneralandlocalanestheticagents
   d) DrugsactingonCVS:antihypertensive,vasoconstrictors,vasodilators,diuretics,mu colyticagents.Drugsthatinfluencemyocardiaccontractilityandheartrate.
   e) Drugs acting on Respiratory system: bronchodilators, drugs used in inhalationtherapy,drugsactingonCNSandcardiorespiratorysystemwhichinfluenc ethephysical exercise.
5. AntimicrobialAgents
6. Immunologicalagentsandvaccines
7. Chemotherapeuticagents
8. EndocrinePharmacology:thyroxin,glucocorticoids,anabolicsteroids,calcitonin,ins ulinandhypoglycemicagents
9. Thevitamins

10. Irritantscounterirritants

Course Code	CourseName	CourseOutcome
FPB120102	PHARMACOLOGY	CO1: `Recall pharmacological classifications of drugs commonly used in physiotherapy, demonstrating knowledge of drug actions and indications. CO2: Identifywhetherthepharmacologicaleffecttothedruginterfereswiththetherapeuticresponseofphysiotherapyandviceversa CO3: Apply pharmacological knowledge to develop safe and effective treatment plans, considering individual patient characteristics and potential drug interactions. CO4: Analyze the pharmacokinetics and pharmacodynamics of specific drugs used in physiotherapy, understanding how variations in drug response may impact therapeutic outcomes

4.EXERCISETHERAPYII(FPB120103)

OBJECTIVES:

Attheendofthecourse thecandidate willbeableto

1. Describe the biophysical properties of connective tissue and the effect of biomedicalloadingandfactorswhichinfluencethemusclestrengthandmobilityofarticula randperiarticularsofttissue.
2. Acquire the skill of assessment of isolated & group muscle strength, & Range ofmotionofthejointssubjectively&objectively
3. Todemonstrate generalfitness,exerciseandshallgainfitnessforoneself

Syllabus

1. **Passive movements**: Definition, types, technique, effects and uses, CPM unit,comparison of active with passive movements for all joints of exterminates, neck andtrunk.
   Stretching: Definitions related to stretching, types of contractures anddifferentiationproperties of soft tissues affecting elongation and aims of stretching,manualand mechanical stretching,cyclemechanicalstretching,indicationsandaimsofstretching, principles andcontraindications
   Traction:types,effects,principlesofapplicationforcervicalandlumbarspine,tractio ntosofttissuesofjoints –glidingmovements
2. **Mobilization**: causes of restriction of R.O.M., prevention of restrictions, techniquesof mobilization of various joints of limbs to mobilize joint R.O.M. through functionaldiagonal patterns, joint mobilization; manipulation-definition, types; joint shapes,types of motion; stretching, glides, compression, traction, indications,contraindications,precautionsandconditionsforspecialprecautions.
3. **Advance soft tissue Mobilization:** Basic principles of MET (Muscle EnergyTechnics), MFR (Myofacial Release Technics), PRT (Positional Release Therapy),NTM(NeuralTissueMobilization).
4. **M.M.T.:** need of M.M.T., uses, fundamental principles, anatomical andphysiological basis, Oxford scale of muscle gradation, principles of isolation,substitution, stabilization, grading procedure for muscles of extremities, neck andtrunk.Voluntarycontrolofmovement gradationbyBobath,Brunnstrom.
5. **Posture:** Types, factors influencing posture, regulation of posture and posturemechanism, pelvic tilt and postural deviations of spine and its treatmentCrawlingexercises:principles,types,effectsandusesofClapp'crawl
6. **Strengtheningofmuscles(PRE):**Principlesinvolvedtopreventmuscle wasting, Rood's technique of initiating muscle contraction, progressivestrengtheningofmuscles(loadsassistedandresistedexercises),useofequi

pment,reeducation of

muscles and restoration of functions, practice of strengthening of muscles of limbs, neck,trunk and face, emphasis on hand and foot muscles, quadriceps, glutei, triceps, deltoid andface muscles, use of manual and mechanical resistance, contraindications, isometric andisokineticexercisesregime, plyometrics,MET(MuscleEnergyTechniques)

7. **Proprioceptive Neuromuscular Facilitation**: Introduction, responses of NM mechanism,basis techniques of PNF patterns of arm, leg, neck, head and trunk (emphasis onstraight patterns), specific techniques of emphasis-repeated contractionsslow reversal,contractandrelax,holdandrelax,rhythmicstabilization,inhibitory techniques,BobathRood'sandKabat.
8. **Relaxation:** Muscle tone, postural tone, general and local relaxation techniques ofrelaxation
9. NeuroMusculacoordination:Factorsgoverningcoordination,principlesofre education,Frenkel'sexercisesanditstechniques
10. **Functional Reeducation:** Mat activities for re education of hemiplegics, paraplegicsandcerebralpalsy,walkingreeducationinneurologicalandorthopediccond itions.
11. **Aerobic exercises:** Physiological effects and therapeutic uses, fitness testing, stresstesting for healthy and convalescent individuals. Pharmacological aspects ofexercises.
12. **Breathing exercises:** Mechanisms of normal breathing, muscles of respiration,changes in thoracic cage during the process of respiration, segmental anddiaphragmaticbreathingexercises,pursedlipbreathing,FET,breathingmechanisms and postural drainage, assistive measures, techniques, indications andcontraindications
13. **Hydrotherapy:** Physiological properties of water and hydrodynamics, physiologicalandapplicationsofBadRagazTechnique,indicationsandcontraindication s

TopicDistributionforPaperSetting	
Section	**Topic Sr. No.**
I(40 Marks)	1-6
II(40 Marks)	7-13

Course Code	CourseName	CourseOutcome
FPB120103	EXERCISETHERAPYII	CO1: Describe advanced principles of exercise physiology, biomechanics, and rehabilitation strategies, demonstrating knowledge of specialized concepts in exercise therapy CO2: Demonstrate general fitness, exercise and shall gain fitness foroneself. CO3: Apply advanced exercise prescription principles to design and implement comprehensive rehabilitation programs for complex musculoskeletal and neurological conditions. CO4: Acquiretheskillofassessmentofisolated&group musclestrength,&Rangeofmotionofthejointssubjectively&objectively

5. KINESIOLOGY(FPB120104)

OBJECTIVES:

Attheendofthecourse thecandidate willbeableto

1. Acquire the skill of assessment of isolated and group muscle strength subjectively andobjectively.
2. Analyzenormalhumanpostureanditsassociatedproblems,itsmanagement.
3. Analyzethevariousnormalmusculoskeletalmovementsduringbreathing,gaitanddaily livingactivitiesandintermsofbiomechanicalandphysiologicalprinciples.

Applicationof

1. **Mechanicsofjointmotion:**Structureandtypesofjointsandtypesofmovements
2. **Mechanics of muscular action:** Classification of muscles, line of pull, types ofcontractions, role of muscles and tendons, action of two joint motions, non customaryaction
3. **SkilledMovements:**Ropeclimbing,cycling,running,ballisticandvolitionalmo vements
4. **Impetus:**Impetustoexternalobjectsandreceivingimpetus
5. **Locomotion:**Normalgaitanalysis:definitionofgait,phasesofnormalgait,normalgaitw ithkineticandkinematics,abnormalpathologicalgaits,gaittraining
6. **Biomechanics of joints:** Kinetics, kinematics and patho-mechanics of joint – hip ,knee,ankle,foot, shoulder,elbow,wristandhand
7. **Biomechanics of spinal column:** Spinal curves, articulations, non contractile softtissue of column, IV disc, ligaments, intrinsic equilibrium, movements of spinalcolumnandmusclemechanics
8. **Mechanics of pelvic complex:** Pelvis at rest, in standing body and in motion, pathomechanicsofpelvis
9. **Mechanicsofthorax:**Movementsbetweenribsandvertebrae,sternumandribs,path omechanics ofrespiration
10. **Postural strain and occupational hazards**: Correct use of body mechanics at home, atschool and work, recreation, particular application for patients, physiotherapists andotherstaff.
11. **Kinetics and kinematics of ADL:** Supine to sitting, Sitting to standing, Squatting,Climbing up and down, pushing, pulling, overhead activities, walking, running,Jogging.

CourseCode	CourseName	CourseOutcome
FPB120104	KINESIOLOGY	CO1: Acquire the skill of assessment of isolated and group muscle strengthsubjectivelyandobjectively. CO2: Recall the major anatomical structures and functions involved in human movement, demonstrating knowledge of the principles of kinesiology. CO3: Apply kinesiology to optimize movement patterns in various activities, such as sports, ergonomics, and rehabilitation exercises. CO4: Analyzethevariousnormalmusculoskeletalmovementsduringbreathing,gaitand dailylivingactivitiesandintermsofbiomechanics andphysiologicalprinciples.

6.PSYCHIATRY(FPB120105)

OBJECTIVES:-

Attheendofthecourse, thestudentwillbeableto

1. Enumeratevariouspsychiatricdisorderswithspecialemphasistomovement,painandADL & describe the various causative factors and methods of assessment andmanagement
2. Acquire the knowledge in brief about the pathological and etiological factors, commonsigns andsymptomsandmanagementofvariouspsychiatricconditions
3. Describeinbriefthevarioustreatmentmodalitiescommonlyused.

SYLLABUS:-

1. Mentalhealth:

a) NormalMentalHealth
b) Criteriaofnormalityormaturedpersonality
c) Factorscontributingtonormalmentalhealth.

2.StudyofAbnormalPersonality:

a) Neurotic
b) Hysterical
c) Psychotic
d) Paranoid
e) Schezoid
f) Psychopathicetc.

3.GeneralEtiologicalFactors:

a) Hereditary
b) GeneticalConstitutional
c) Acquired
d) Traumatic
e) Infective
f) Toxic
g) Degenerative
h) SocialandEnvironmentalincludingpathogenicfamilypatterns
i) Precipitatingcauses
j) Frustrationandconflicts.

4. SymptomatologyandTreatmentofPsychoses:

a) Functional - Functional Schizophrenic, reaction group, simple, paranoid, catatonic,hebephrenicparanoidstate,paranoia,juvenile,schizophrenia,autisticthinking,dementia.

b)Organic-Toxicconfusedstates,senilepsychoses,arteriosclerotic,degenerative,G.P.I.

AffectiveDisorders:DynamicsofMania,hypomania,chronicmania,M.P.D.

Involutional depression, senile depression, postpartum depressivereactions,reactive and neuroticdepression,endogenousdepression,suicide(egoistic,Altruistic, Anomic)EpilepticDisorders:Epileptic Psychoses.

5. Neurosis:

a)Symptomatology,diagnosisandtreatmentandpsychodynamicsofanxietystate,hysteria, conversionreaction,dissociativereaction,dualpersonality,obsessionalneurosis, phobias,hypochondriasis, neurastheniaand mentalfatigue.

6. MentalRetardation:

a) Definition,
b) Etiologicalfactors-Prenatal,postnatal,infective,hormonal,congenital.

c) Types of mental retardation, clinical types-microcephaly, hydrocephalus, mongot, familyIdiocy, phenylketonuria etc. Symptomatology of various grades of retardation, differentialdiagnosisandtreatments.

7. ChildPsychology:

a) Behavior disorders - Nail biting, Enuresis, Truancy, Thumb sucking, Speechdifficulties,Pica,Vomiting,Anorexia,delinquency.

8. IntroductiontodynamicsofPsychophysicaldisorders:

a) Asthma,skinrashes,hypertension,boweldisorders.
b) Introductiontotreatmentinpsychiatry-E.C.T.,Insulin,comatherapy.
c) Drug therapy - Tranquilizer, Mood elevators, hypnotics and sedatives, Psychotherapy - Deep and superficial, individual and group, expressive, suppressive, environmentalmanipulation,re-educative.
d) Psychodrama
e) Psychoanalysis
f) PlayTherapy

Course Code	CourseName	CourseOutcome
FPB120105	PSYCHIATRY	CO1: Recall major psychiatric disorders, understanding the diagnostic criteria and classifications in psychiatry. CO2: Enumerate various psychiatric disorders with special emphasis tomovement,painandADL &describethevarious causativefactors andmethodsofassessmentandmanagement CO3: Acquiretheknowledgeinbriefaboutthepathologicalandetiologicalfactors, common signs and symptoms and management of variouspsychiatricconditions CO4: Analyze the impact of psychiatric disorders on a patient's physical and emotional well-being, recognizing the interplay between mental and physical health.

7.ELECTROTHERAPY(FPB120106)

OBJECTIVES

Attheendofthecourse thecandidate willbeableto

1. Recall the Physics – Principles and laws of electricity, Electromagnetic spectrum,Ultrasound
2. Describetheelectricalmainsupply,Electricshock–precautions
3. Describe and identify various types of electrodes used in therapeutics, resistanceofferedbytheskin andsignificanceofvariousmediausedtoreducethesame
4. Describetheproduction,physiologicaleffects,therapeuticuses,merits/demerits,indications and contraindication of various Low, Medium and High frequencycurrentsandmodes. Describe thepanel diagramsofthemachine
5. AcquiretheskillofapplicationofLow,MediumandHighfrequencycurrentsonmodelsforthepurposeoftreatment
6. Describe the physiological effects and therapeutic uses of various therapeutic ions tobeusedfortheapplicationofIontophoresis
7. Describeeffectsofelectromagneticfieldatthecellularlevelandriskfactorsonprolongedexposure
8. Describethephysiologicaleffectsandtherapeuticusesofvarioustopicalpharmacotherapeutic agentstobeusedfortheapplicationofphonophoresis
9. Acquireanabilitytoselecttheappropriatemodeasperthetissuespecificandareaspecific application.

Syllabus

1. LOWFREQUENCYCURRENTS

a) **Review of physics:** Current, electricity, Ohm's law, Resistance, Rheostats,potentiometers,Electromagneticinduction,capacitors,valves,semiconductorsandtransistors

b) **Nerve Muscle Physiology:** Resting potential, action potential, propagation of actionpotential, motor unit, synapse and synaptic transmission of impulses. Effect ofnegativeandpositiveelectrodesonnerve&accommodation

c) **Electricshock:**Causes,severity,treatmentandprecautionsEarthshockanditsprecautions

d) **Faradic Current:** Definition, characteristic and modified faradic current, sinusoidalcurrent, parameters of faradic stimulation, physiological and therapeutic effects offaradic-stimulation.Indication,contra-

indicationsandprecautions,techniquesof

Stimulation-groupmusclestimulation,faradicfootbath,faradismunderpressureandPelvicfloormuscle re-education

InterruptedDirectCurrent: Introduction&characteristics,ParametersofStimulation,physiologic alandtherapeuticusesofstimulation,precautions

e) **Galvanic Current:** Introduction & characteristics, Parameters of stimulation,physiologicalandtherapeuticusesofstimulation,precautions

f) **Iontophoresis:** Definition, principles of iontophoresis, physiological and therapeutic uses,indications, techniques of iontophoresis, principles of treatment, contraindicationsanddangers

g) **TENS:**Definition,types,Theoriesofpainmodulation emphasizingon"Paingate" theory,techniquesoftreatment,indicationandcontra–indications

2. MEDIUMFREQUENCYCURRENT

a) **Interferentialcurrent:**Definition,characteristics,physiological&therapeuticeff ects of Interferential current, techniques of application, indications,contraindicationsandprecautions

b) Bio-feedback:Introduction,principlesofBio-feedback,therapeuticeffectsofbiofeedback, Indicationsandcontra-indications,techniquesoftreatment

c) Advanced Electrotherapy: Computerization in electrotherapy, Programming ofparametersoftreatment,appropriateselectionsofparametersandcombinationth erapy, Combination therapy-principles, therapeutic uses and indications like,Ultrasoundtherapywithstimulation or TENSetc.

d) IntroductiontoRussiancurrent,Dia-dynamiccurrent,HVPGSandMicrocurrents

e) ElectricalcurrentsforCareofthewound

3. HIGHFREQUENCYCURRENT

a) Short Wave Diathermy (SWD): Introduction, physiological effects and Therapeuticeffects of SWD, methods of application (capacitor field method and cable methodetc.)Techniquesoftreatment,indication,contra-indicationsanddangers.

b) Pulsed SWD: Definition, characteristics, mechanism of work, physiological effects andtherapeutic effects, indications, techniques of application, principles of treatmentandcontra-indications

c) Ultrasonic Therapy: Introduction and characteristics, Ultrasound Therapyparameters, coupling media, therapeutic effects, indications contra-indications anddangers,testingofapparatus,techniquesofapplication&dosage,Phonophoresis

d) Electromagnetic waves: Electromagnetic spectrum, physical properties ofelectromagnetic radiations-reflection, refraction, absorption penetration, Grothus'law,Cosinelaw,Inversesquare lawanditspracticalapplication

e) Cellular bio-physics – reception and emission of

electromagneticsignals Environmental currents and fields – risk factors on prolongedexposuretoelectromagnetic field

f) InfraRedRays(IRR):Productionof infraredrays,luminousandnon–luminous

generators, penetration, technique of application, physiological effects and therapeuticuses of infra-red rays, duration and frequency of treatment, indications and contraindications,dangers andprecautions.

g) Ultra Violet Rays(UVR): Production of UVR, test dose, physiological effects ofUVRdosimetryinUVR.PUVA

h) LASER:Introductionandcharacteristics,effectsontissue,therapeuticeffects,principlesofapplication,indications,contra-indicationsanddangers

i) Microwave Diathermy (MWD): Introduction and characteristics, physiologicaleffects,therapeuticseffects,techniquesofapplicationandprinciplesoftreatment,indications,contra-indicationsanddangers

Superficialheatmodalities:Structureoftheapparatus,compositionofwaxand mineral oils physiological effects and therapeutic uses of wax bath,techniqueofapplication

j) OtherHeatingModalities:Heatingpad,moistheatandfluidtherapy

k) Cry therapy: Physiological effects and therapeutic uses of ice therapy, Techniquesofapplication,contra–indication toicetreatment

l) Hydrotherapy:Propertiesofwaterbuoyancy,effectsofbuoyancyonmovement, Hubbardtank,contrastbath,whirlpoolbath

m) Careofthewound:UVR,LASERandUltrasound

n) RecentadvancesinElectro-physiotherapy:Highintensitylaser,Shockwave,PEMF (Pulse Electro Magnetic Energy), Spinal Decompression, PneumaticCompressiontherapy, FES,virtualrealitytraining.

TopicDistributionforPaperSetting	
Section	**Topic Sr. No.**
I(40 Marks)	Low&Mediumfrequencycurrents
II(40 Marks)	Highfrequencycurrent

Course Code	CourseName	CourseOutcome

FPB12 0106	ELECTROTHERAPY	CO1: Apply electrotherapy to select and administer appropriate modalities for specific patient conditions, considering individualized treatment goals and safety precautions. CO2: Describevarioustypesof electrodesusedintherapeutics,resistance offered by the skin and significance of various media used toreducethesame CO3: Describe the principles of electrotherapy, including the physiological effects of different electrical modalities used in physiotherapy. CO4: Explain the indications and contraindications of various electrotherapeutic modalities, understanding their applications in different clinical scenarios.

8. MiscellaneousMedicines (FPB120107)

RADIOLOGY
(NotforUniversityExam)

OBJECTIVES
Attheendofthecourse thecandidate willbeableto
1. Identifycommonchestconditionstogetherwithbasictraumatic,infective,infl ammatoryanddegenerativeconditionsandbonyskeletal
2. ReadCT,MRIofdifferentjoints.

Syllabus
1. IntroductiontoRadiology
2. ImportanceofRadiologyinPhysiotherapy
3. X-raysoffracturesofdifferentbonesinthebody
4. X-raysofdifferentstagesoffracturehealing
5. X-raysofdifferentOrthopedicconditions-Osteoarthritis,Rheumatoidarthritis
6. Cervical&lumbarspondylosis,footdeformitiesetc.
7. X-raysofcommonchestconditions
8. C.TScan,M.R.I.,Angiography,3Dreconstructionofbones&joints

ENT
(NotforUniversityExam)

OBJECTIVES:
Attheendofthecourse thecandidatewillbeableto:
Identify common ear, nose, throat conditions together with basic traumatic, infective,inflammatory and degenerative conditions and skeletal, muscular or any otherstructuralabnormalities

SYLLABUS:
1. Anatomy&PhysiologyofHearing:Assessment&Management ofHearingLoss
2. IntroductiontoDiseaseofENT:Otitismedia,Sinusitis&Rhinitis
3. FacialNervePalsy:Causes&Management
4. Larynx&Associatedfunctionalparalysiswithtracheostomy&Careoftracheostomy
5. Vertigo:Causes,Assessment&Management.

OPTHALMOLOGY
(NotforUniversityExam)

OBJECTIVES:-
Attheendofthecourse,thestudentswillbeableto
1. Acquireknowledgeofstructureandfunctionoftheeye

2. Describe etiology, patho-physiology, sign and symptoms and clinical evaluation ofcommonophthalmicconditionsrelated toPhysiotherapy

SYLLABUS:-

1. Commoneyediseases,includingRefractoryerrors,conjunctivitis,andtrachoma.
2. Cataractandglaucoma.
3. Squintandptosis.
4. Eyelesionsinleprosy,includingcausestreatmentandcomplicationsoflagophthalmos.
5. Causes, clinical features and treatment of disorders of occular movement occurring indiseasessuchasmyastheniagravis,progressivesupranuclearpalsyandlowermotoneurondiseases.
6. Causes,clinicalfeatures,treatmentandprognosisininflammatorydisorders,vitaminAdeficiency,emphasisonpreventablecausesandprophylacticmeasures.
7. Definition of blindness, and visual disability evaluation, investigative procedures used fortestingvisualfailures.

9.ALLIEDTHERAPEUTICS(FPB120108)

(NotforUniversityexam)

OBJECTIVES:-

Attheendofthecourse thecandidate willbeableto

1.Comprehendtheuseofvariousalliedtherapeuticsciencesinhealthcaredelivery.

SYLLABUS:-

1. Acupunctureandacupressure:definition,principles,techniques,physiologicalandthe rapeuticeffects,contraindicationsand dangers
2. IntroductiontoNaturopathy
3. Magnetotherapy
4. YogaSana,pranayamaandtheirscientificstudy
5. Dryneedling(DN)
   a) Introduction

9. RECENTTRENDS(FPB120109)

(Notforexam)

PROFESSIONALPRACTICE&ETHICS

OBJECTIVES:

Attheendofthecourse thecandidatewillbeableto:

1. Beabletounderstandthemoralvaluesandmeaningofethics
2. Acquire bedside manners and communication skills in relation with patients, peersseniorsandotherprofessionals.
3. Beabletodeveloppsychomotorskillsforphysiotherapistpatientrelationship.
4. Skilltoevaluateandmakedecisionforplanofmanagementbasedonsocioculturalvalues andreferral practice.
5. Beabletodevelopbehavioralkillsandhumanitarianapproachwhilecommunicatingwith patients,relatives,societyatlargeandco-professionals
6. Beabletodevelopbedsidebehavior,respect&maintainpatients'confidentiality.

SYLLABUS:-

1. Ethicalcodeofconcept
2. Communicationskills
3. Physiotherapist-patientrelationship
4. Interviews–Typesofinterview,skillsofinterviewing

EVIDENCEBASEDPRACTICE&ICF

OBJECTIVES:-

Attheendofthecourse thecandidate willbeableto

1. UnderstandconceptofEvidenceBasedPracticeanditsimplementationinPhys iotherapy
2. Search,reviewandusetheevidencesinPhysiotherapy

SYLLABUS:-

IntroductiontoEvidenceBasedPractice

Definitions,EvidenceBasedPractice,EvidenceBasedPhysiotherapyPractice

Concepts of Evidence based Physiotherapy Awareness, consultation, judgment, creativity**DevelopmentofEvidencebasedknowledge**

Theindividualprofessional,professionalswithinadiscipline,professionalsacrossdisciplin
es

EvidenceBasedPractitioner

Thereflectivepractitioner, theEmodel

THIRDYEARBACHELOROFPHYSIOTHERAPY

1. MEDICINE-I (FPB130101)

GENERALMEDICINE

OBJECTIVES

Attheendofthecourse,thecandidatewillbeableto

1. Acquire the knowledge of Etiology, Patho-physiology, signs and symptoms and management inbrief,of the infectious diseases, diseases of metabolism especially obesity and other related medicalconditions,diseasesofhematopoieticsystem,diseasesofGIandurinarytract&endocrinedisorders

2. Describe etiology, patho-physiology, sign and symptoms, clinical evaluation and management ofthe various cardio-vascular and respiratory disorders with interpretation of investigations: chest x-ray,Echocardiography,blood gasanalysis, bloodinvestigationsandpulmonaryfunctiontest

3. Acquire the knowledge of auto-immune & rheumatological conditions with special emphasis tothoseinvolvingmusculoskeletalsystemandskin,withregardstoetiology,pathophysiology,signsandsymptoms, differentialdiagnosisandmedical managementofsame

SYLLABUS:-

1. **RespiratoryDiseases:** Lung function tests, pneumonia, ILD, Respiratory failure, pulmonary edema,pulmonaryembolismlungabscess,bronchiectasis,asthma,emphysema,pleuraleffusion,Pneumothorax,empyema,chronic bronchiectasis,
2. **Cardio Vascular Diseases:** Rheumatic fever, valvular lesions, congestive cardiac failure, ischaemicheart diseases (Angina pectoris and myo-cardial infarction) stress test, hypertension, peripheralvascular-diseases(TAO,Raynaudsdisease).
3. **EndocrinalDisorders:**Diabetesmellitus,obesity,thyrotoxicosis, myxodema.
4. **Gastro-intestinalDisorders:**Pepticulcer,pancreatitis,dysentriesanddiarrhea,inflammatorybowel diseases,jaundice,cirrhosis ofliver.
5. **InfectiousDisease:**Tuberculosis,malaria,typhoid,infectivehepatitis,tetanus.
6. **NutritionalDisorder:**Vitaminsanditsdeficiencies,disordersincludingricketsandosteomalacia,anaemia.
7. **UrogentialSystem:** Structure and functions of kidneys including physiology of micturition, acuteandchronicrenalfailure,glomerulo-nephritis,pyelonephritis.
8. **Rheumatology:**Rheumatoidarthritis,ankylosingspondylitis,gout,osteoarthritis

Spondyloarthritis,systemic lupus erythromatous, polyarteritisnodosa, mixed connective tissuedisorders, scleroderma.

CourseCode	Course Name	CourseOutcome
FPB130101	GENERAL MEDICINE	CO1: Recall the major diseases and conditions within the scope of general medicine and dermatology, demonstrating basic knowledge of common medical disorders and skin conditions CO2: Acquire knowledge in structure and function of the skin and aboutvarious primary, secondary and special skin lesions related to systemicdisorders CO3: Describeetiology, clinicalfeatures,andmanagement ofbacterial,fungal,viral,allergic,autoimmuneskindiseases CO4: Apply general medicine to conduct comprehensive patient assessments, including history-taking and physical examinations, recognizing symptoms and signs related to medical and dermatological issues

SKIN&V.D.(DERMATOLOGY)

OBJECTIVES:-

Attheend ofthecourse,thestudentswillbeableto

1. Acquireknowledgeinstructureandfunctionoftheskinandaboutvariousprimary,secondaryandspecialskinlesions relatedtosystemic disorders
2. Describeetiology,clinicalfeaturesandmanagementofbacterial,fungal,viral,allergic,autoimmuneskindiseases
3. Acquireknowledgeinsexuallytransmitteddiseasesandleprosy.

SYLLABUS:-

1. Structureandfunctionsofnormalskin,primaryandsecondaryskinlesions.
2. Scabiesandpediculosis.
3. Fungalinfectionsofskin:Dermatophytosis,Pityriasisversicolor,Candidiasis.
4. Bacterialinfectionsofskin-lmpetigo/Boil.
5. Viralinfectionsofskin-Herpeszoster.
6. Eczema/Dermatitis/Allergies.
7. Psoriasis/Acne/Alopecia/VitiligoandLeucoderma.
8. Leprosy/Lepra-reaction/Physiotherapyinleprosy.
   Sexuallytransmitteddiseases:Syphillis-primary&secondary,Gonorrhoea,Chancroid,,AIDS.

CourseCode	Course Name	CourseOutcome
FPB130101	SKIN &V.D.(DERMATOLOGY)	CO1: Recall the major diseases and conditions within the scope of general medicine and dermatology, demonstrating basic knowledge of common medical disorders and skin conditions CO2: Acquire knowledge in structure and function of the skin and aboutvarious primary, secondary and special skin lesions related to systemicdisorders CO3: Describeetiology, clinicalfeatures,andmanagement ofbacterial,fungal,viral,allergic,autoimmuneskindiseases CO4: Apply general medicine to conduct comprehensive patient assessments, including history-taking and physical examinations, recognizing symptoms and signs related to medical and dermatological issues

MEDICINE-II (FPB130102)
NEUROLOGY

OBJECTIVES:-

Attheendofthecourse,thecandidatewillbeableto

1. Describe etiology, patho-physiology, sign and symptoms, clinical evaluation and managementofthevariousneurologicalconditionswithinterpretationoflaboratory&radiologicalinvestigations.

SYLLABUS:-

1. Anatomy,Physiology,LesionsanddiseasesofPyramidalsystem,extra-pyramidalsystem,cerebellarsystem, spinal cord, upper andlower motor neuron, cranial nerves, brachialplexus,lumbosacralplexusand peripheralnerves.

2. Causes,Clinicalfeatures,andmanagementof:Unconsciouspatient,hemiplegia,paraplegia,quadriplegia,cerebraldiplegia,spasticchild,foot dropandwristdrop.

3. Disordersofcerebralcirculation.

4. Infections:Encephalitis,meningitis,poliomyelitis,transversemyelitis,slowviraldiseases.

5. DiseasesofPeripheralnerves:Peripheralneuropathy,otherneuropathies.

6. Muscledisorders:Myopathy,polymyositis,Musculardystrophies.

7. Degenerative diseases: Parkinsonism, myasthenia gravis motor neuron diseases, spinocerebellardegenerationsanddiseasesofanteriorhorncell,dementia.

8. Costo-clavicularsyndrome.

9. Demyelinatingdisordersincludingmultiplesclerosis.

10. Basicconceptofelectrophysiologyandelectromyography.

11. Giddinessandvertigo

CourseCode	Course Name	CourseOutcome
FPB130102	NEUROLOGY	CO1: Underline common neurological and pediatric disorders, demonstrating knowledge of developmental milestones and neurological conditions affecting various age groups. CO2: Describeneuromuscular, Musculoskeletalandcardiopulmonaryconditions related to immunological conditions, nutritional deficiencies,infectiousdisease,andgenetically transmittedconditions. CO3: Acquired clinical examination of a neonate / child with respecttoneurological,musculoskeletal,andrespiratoryfunction. CO4: Apply neurology and paediatrics to assess and treat children and adults with neurological conditions, adapting interventions based on age-specific considerations.

PAEDIATRICS

OBJECTIVES:-

Attheend ofthecoursethecandidate willbeableto

1. Describe normal development and growth of a child, importance of immunization and breastfeeding andpsychological aspectofdevelopment

2. Describeneuromuscular,musculoskeletalandcardiopulmonaryconditionsrelatedtoimmunologicalconditions, nutritional deficiencies, infectious disease and genetically transmittedconditions

3. Acquiredskillofclinicalexaminationofaneonate/childwithrespecttoneurological,musculoskeletalandrespiratoryfunction.

SYLLABUS:-

1. Growth and development of a child from birth to 12 years, including physical, social, adaptivedevelopment.

2. The maternal and neonatal factors contributing to high risk pregnancy, the neonate, inheriteddiseases, maternal infections - viral and bacterial, maternal diseases incidental to pregnancy,induced hypertension,chronicmaternaldiseasessuchasheartdiseases,renalfailure,tuberculosis,diabetes, epilepsy,bleedinginthemotheratanytrimester.

3. Communityprogrammes:International(WHO),nationalandlocal,forpreventionofpoliomyelitis,blindness, deafness,mental retardation and hypothyroidism, theimmunization schedule forchildren.

4. CerebralPalsy:Etiology-prenatal,perinatalandpostnatalcauses,pathogenesis,typesofcerebralpalsy(classification),findingsonexamination,generalexamination,examinationofC.N.S.,musculoskeletalsystem,respiratorysystem,G.I.Tractandnutritionalstatus.

5. Associated defect-downs syndrome, Mental retardation, microcephaly, blindness, hearing andspeechimpairment,squintandconvulsions.

6. Prevention - Appropriate management of high risk pregnancies, prevention of neonatal andpostnatalinfections,metabolicproblems.
7. Muscular Dystrophy: Various forms, modes of inheritance and clinical manifestation, physicalfindings in relation to disabilities, progression of various forms and prognosis, treatment goals informswhicharenotfatal.
8. Spinabifida,Meningomyelocele:Development,clinicalfeatures-lowerlimbs,bladderandbowelcomplications -U.T.I.andhydrocephalus,medical management.
9. Still'sDisease:Classification,pathologyinbrief,physicalfindings,courseandprognosis,treatment,preventionandcorrectionofdeformity.
10. Acute C.N.S. infections, Classification (Bacterial and Viral), the acute illness, C.N.S. squeal leadingto mental retardation, blindness, deafness, speech defect, motor paralysis, bladder and bowelproblems, seizure disorder and specific problems such as subdural effusion, hydrocephalus,pressuresores,feedingdifficulties.
11. Normaldietofnewbornandchild:Listdietarycalorie,fat,Protein,mineralandvitaminrequirementinnormalchildandinachildwithmalnutrition.Childhood`obesity.Etiology,findings,andtreatmentofrickets,vitaminDdeficiency,and resistantrickets
12. Lung infections: Clinical findings, complications, and medical treatment of bronchiectasis, lungabscessandbronchialasthma.

CourseCode	Course Name	CourseOutcome
FPB130102	PAEDIATRICS	CO1: Underline common neurological and pediatric disorders, demonstrating knowledge of developmental milestones and neurological conditions affecting various age groups. CO2: Describeneuromuscular, Musculoskeletalandcardiopulmonaryconditions related to immunological conditions, nutritional deficiencies,infectiousdisease,andgenetically transmittedconditions. CO3: Acquired clinical examination of a neonate / child with respecttoneurological,musculoskeletal,andrespiratoryfunction. CO4: Apply neurology and paediatrics to assess and treat children and adults with neurological conditions, adapting interventions based on age-specific

		considerations.

3.SURGERY(FPB130103)

GENERALSURGERY&PLASTICSURGERY&NEUROSURGERY

OBJECTIVES:-

Attheendofthecourse,thestudentwillbeableto

1. Describetheeffectsofsurgicaltraumaand anesthesiaingeneral
2. Classify,clinicallyevaluateanddescribethesurgicalmanagementinbriefin

a)wounds-ulcersb) burns

3. Describepre-operativeevaluation,surgicalindicationsandvarioussurgicalapproachesinvariousabdominalconditionsandperipheralvascularconditions
4. Recall the surgical approaches in the form of line diagram and will be able to describe thecomponentsofsofttissuescuttoreachthetargettissue,andthepossiblepost-operativecomplicationsinmovement
5. Clinically evaluate post-operative abdominal conditions with special reference to the cardio-vascularandpulmonaryfunction,describepost-operativemanagementinbrief.
6. Describe the management of head injury, spinal surgeries, intracranial tumors, peripheral nervelesionsand pain

SYLLABUS:-

1. Acute infections, Inflammatory fever, bacteremia, septicemia, pyemia, toxemia. Specific types - Cellulitis- sites lymphangitis, abscesswithspecialreferencetohandinfection,carbuncle.
2. Specific types cont'd: Tetanus, gas gangrene, hospital infection,cross infection with modes ofspreadandprevention,Generalsurveyofchronicinflammations,Syphilis(referencetoother

venerealdiseases)leprosy,actinomycosis.

3. General survey of trauma, pathology and clinical features of wound repair - primary, secondaryandtertiarywoundhealing,Cleanwounds,contaminatedwoundsandinfectiouswounds,Principles of treatment, survey of factors affecting wound healing, Ulcers and gangrene, Post-operativecomplicationsofabdominalsurgeryspecificallychest, wound infection,oedema.

4. Burnsasaspecifictypeofseveretrauma,classification,earlyandlatecomplications,management,&reconstructivesurgery-skingraftingasanexampleofplasticprocedure.

5. Types of skin grafting - take of grafting - healing of grafting, Post operative care of plastic surgerywithspecific roleofphysiotherapy,

6. Outlineofsurgicaldisordersofbrain-head injuries.

   Generalsurveyofsurgicaldisordersofspineandspinalcordproblemofparaplegia,malignancy-spreadanditsbehavior,variousabdominalincisions,abdominaldrainagetubes,catheters and nasogastric tubes, ward demonstration for an hour a day for a period of oneweek.

7. Anesthesia,O.T.demonstrations.

8. Neck,skincontracturesandcorrection.

9. Problemsoftraumatohandandtheirmanagement, Urinarytractinfection.

10. Principles of cineplasty, tendon transplant, cosmetic surgery types of grafts, surgery of handswithemphasisonmanagementoftraumatic andleprosyhand.

11. Breast – surgery

12. Neurohysiology- NeuroPhysiology, basis of tone, disorders of tone and posture, bladder control,musclecontraction,movementandpainwithclinicalfeaturesandmanagementofthefollowing

a) a)Congenitalandchildhooddisorders-hydrocephalusspinabifida

b) Trauma-Broadlocalization,firstaidandmanagementofsquealofheadinjuryandspinal

cordinjury.

c) Diseases of the Spinal Cord - Craniovertebral junction anomalies, syringomyelia, cervicalandlumbar disc disease,tumors.

d) Peripheral nerve disorders - Peripheral nerve injuries, localization & management. Entrapmentneuropathies.

e) Intracranialtumors-Broadclassification,signsandsymptoms.

f) Pre-operativeAssessmentandindicationsandcontra-indicationforneurosurgeryinintracranialtumors

g) Managementofpain,electricalstimulationofbrainandspinalcord.

h) Miscellaneous.

Clinical: Operation Theator(O.T.) Visit

CARDIOTHORACICSURGERY

OBJECTIVES:-

Attheendofthecourse,thestudentwillbeableto

1. Describetypesofincision,preandpost-operativeassessmentandcomplicationsofCardio-thoracicsurgeryandtheirmanagement

2. Clinicallyevaluatepost-operativecardio-vascularandpulmonaryfunctionstatus

3. Readandinterpretinvestigationsincluding findingsofthex-raychest,CTscanandMRIscan.

SYLLABUS:-

1. Basicanatomyofchestwall,tracheaandbronchialtree,lungsandbronchopulmonarysegments, pleura andmediastinum.
2. Physiologyandmechanicsofbreathinganduseofmechanicalbreathing-ventilator:(respirators).
3. Pulmonaryfunctiontests.
4. Investigationoflungdiseasesincludingendoscopies.
5. Chestinjury.
6. Commonsuppurativediseasesoflung-Bronchiectasis,lungabscess.
7. Bronchogeniccarcinoma
8. Commonsurgeriesofchest

   Thoracoplasty, pulmonary

   dissections,thoracotomy. Pneumothorax,

   hydrothorax-Pneumothorax,empyema.
9. Commondiseasesofoesophagusandrelatedconditionscausingdysphagia.
10. Surgeryofportalhypertension.
11. Surgeryofpulmonarytuberculosis.
12. Surgeryofheartandgreatvessels.
13. Basicanatomyofheart,greatvessels.
14. Investigationofpatientundergoingcardiacsurgery.

15. Cardiacarrest,itsmanagement.
16. BasicprinciplesofopenheartSurgery,Heart lungbypass(ExtraCo-portalcirculation)
17. Commondiseasesofheartrequiringsurgerybothcongenitalandacquiredincludingopenheartsurgery.
18. Commondrugsusedincardiacsurgery,itsuses,sideeffects.
19. Commonvascularsurgery,Embolectomy,vascularreconstructivesurgery, (Thrombosis,Embolism,atherosclerоticandocclusivevasculardiseasesincludingcoronaryarterybypass)

Clinical:

1. Examinationofpatientsasregardschest&heartdiseases.
2. Demonstration-AcquaintanceswithC.T.Surgery,
3. Equipments,I.C.C.U.O.T.
4. Radiology-X-raystudies- X-raychestinvariouslungdiseases.

CourseCode	Course Name	CourseOutcome
FPB130103	SURGERY 1.GENERALSURGERY&PLASTICSURGERY &NEUROSURGERY 2. CARDIO THORASIC	CO1: Underline surgical, obstetric, and gynaecological procedures and conditions, demonstrating knowledge of the anatomical and physiological aspects relevant to physiotherapy practice. CO2: Classify, clinicallyevaluate,anddescribethesurgicalmanagement inbriefina) wounds- ulcersb) burns CO3: Describepre-operativeevaluation,surgicalindicationsandvarioussurgical approaches in various abdominal conditions and peripheralvascularconditions CO4: Apply surgery, obstetrics, and gynecology to conduct pre- and post-operative assessments, developing tailored physiotherapy plans for optimal recovery.

	SURGERY	

OBSTETRICSANDGYNECOLOGY

OBJECTIVES:-

Attheendofthecourse,thestudentwillbeableto

1. Describe the normal and abnormal physiological events during the puberty,labor,puerperium,post-natalstageandmenopause

2. Discussvariouscomplicationsduringpregnancy,labor,puerperiumandpostnatalstage,pre-andpost-menopausal stage and various aspects of urogenital dysfunction and the management inbrief

3. Acquireknowledge inbriefaboutintrauterinedevelopment ofthefetus

4. Acquire the skill of clinical examination of the pelvic

floor5.Acquiretheskilloftheclinicalexaminationofpregnantwoman

SYLLABUS:-

1. Anatomyandphysiologyofthefemalereproductiveorgans.Pubertydynamics.
2. Physiologyofmenstrualcycle-ovulationcycle,uterinecycle Cx. cycle,Duration, amount.
3. Hormonalregulationofmenstruation.
4. Diagnosisofpregnancy.
5. Abortion
6. Physiologicalchangesduringpregnancy.
7. Antenatalcare.
8. Highriskpregnancy.
9. Normallabour.
10. Normalpuerperiumandpostnatal.
11. Familyplanning.
12. MedicalTerminationofpregnancy(MTP).

13. Infectionoffemalegenitaltractincludingsexuallytransmitteddiseases,lowbackache.
14. Prolapseofuterusandvagina.
15. PrinciplesofcommongynaecoperationsHysterectomy
16. Menopauseanditseffects
17. Sterility.

Clinical:OperationTheater(O.T.)Visit

CourseCode	**CourseName**	1.**CourseOutcome**
FPB130103	OBSTETRICS ANDGYNECOLOGY	CO1: Underline surgical, obstetric, and gynaecological procedures and conditions, demonstrating knowledge of the anatomical and physiological aspects relevant to physiotherapy practice. CO2: Classify, clinicallyevaluate,anddescribethesurgicalmanagement inbriefina) wounds- ulcersb) burns CO3: Describepre-operativeevaluation,surgicalindicationsandvarioussurgical approaches in various abdominal conditions and peripheralvascularconditions CO4: Apply surgery, obstetrics, and gynecology to conduct pre- and post-operative assessments, developing tailored physiotherapy plans for optimal recovery.

4.PHYSICAL&FUNCTIONALDIAGNOSIS(FPB130104)

OBJECTIVES:-

Attheendofthecourse,thecandidate willbeableto

1. Describethehumandevelopment&maturation;withspecialemphasistopsychomotordevelopment, maturation&alterationduringagingprocess
2. acquire the skill of detection & objective documentation of the neurological, musculoskeletal,cardiovascular&pulmonarydysfunctionssuchaspain,alteredmusclepower,mobility,endurance, limb length, posture, gait, hand function & A.D.L. in adult & pediatric conditions &acquireskill&toarriveattheFunctionaldiagnosisasperInternationalClassificationofFunctioning (ICF)
3. Describe the physiology of nerve impulse, motor unit, its electro-physiological character andacquire theskillofperformanceandinterpretation ofvarious electro-diagnostic tests in theassessmentof peripheralnervelesions
4. BeabletodointerpretationofcommoninvestigationsusedtoarriveatthePhysical&Functionaldiagnosis.
5. SYLLABUS:-

2. GeneralprinciplesofHumandevelopment&maturation

a) Aspects:physical,motor,sensory,cognitive,emotional,cultural,social
b) Factorsinfluencinghumandevelopment&growth:Biological,environmental,inherited.
c) Principles of maturation - in general - in anatomical directional pattern cephalo – caudalproximo–distalcentero–lateral,masstospecificpattern,grosstofine motor development
d) Reflexmaturation tests 5.Developmentin specificfields:Oromotordevelopment,sensorydevelopment,neurodevelopmentofhandfunction.

3. Electrodiagnosis

a) Bioelectricity-Physiologyofgeneration&propagationofactionpotential,volumeconduction

b) Therapeuticcurrent-asatoolforelectrodiagnosis
c) Physiological principles, use of alternating & direct currents in electro-diagnosis such as sensory& Pain threshold, Pain tolerance,-Short & long pulse test, S.D. curves, Chronaxie & Rheobase,accommodationratio,
d) Principlesofnerveconductionstudies,lateresponses*
e) E.M.G.instrumentation,basiccomponents,paneldiagram,typesofelectrodes
f) Principles of Electro- myography, motor unit–Normal characteristics-activity atrest,recruitment/frequencypatternatminimalactivity,Interferencepattern.

4. AssessmentofNeurologicaldysfunction

a) Higherfunctions,cranialnerves,sensations&sensory organization,bodyimage,tone,reflexes:superficial& deep, voluntary control, muscle strength, coordination, balance, posture,gait
b) Scales:FRT,Berg'sBalance,modifiedAshworth,GlasgowComa,TUG,FIM
c) FunctionaldiagnosisusingICF
d) Interpretationofelectrodiagnosticfindings,routinebiochemicalinvestigations

5. AssessmentofMusculoskeletalDysfunction

a) Tightness,deformity,jointmobility,musclestrength,limblength,trickmovement,girth,posture, gait,specialtests
b) FunctionaldiagnosisusingICF
c) InterpretationofX-rayofextremities&spine, routinebio-chemicalinvestigations,CTscan,MRI
d) Assessmentofpelvicfloormusclestrengthandfunctioni.Digitalevaluationofvaginaii. Perineometeriii.Padtest
e) DisabilityEvaluation–gaitandgaitparameters,percentageofdisability(temporaryandpermanent)

6. Assessmentofcardio-pulmonarydysfunction

a) Vitalparameters,chestexpansion,chestexcursion,breathholdingtest,breathsounds,rateofperceivedexertion (RPE), peak flowrate
b) ExerciseTolerance:sixminutes'walktest,shuttletest,theoreticalbasesofBruce'sprotocol,steptest
c) AnkleBrachialIndex,testsforperipheralarterial&venouscirculation
d) FunctionaldiagnosisusingICF
e) InterpretationofX-raychest,routinebio-chemicalinvestigations,ABG,PFT,ECG(normalvalues)

7. Assessmentofpain

a) Intensity&quality
b) Objectiveassessment&documentation:VAS,NumericalRatingScale.Otherscales

8. AssessmentofHand

a) Sensations, mobilityofjoints,strength
b) Specialtests
c) Handfunction:Precision&powergrips

9. AssessmentofObesity

a) Classification
b) Assessment –BMI,Waistcircumference,Waist–Hipratio
c) IntroductiontoQualityofLifeQuestionnaire

10. Assessmentofwounds.

PRACTICALS:Skillstobepracticedonpeer/model

CourseCode	CourseName	3.CourseOutcome
FPB130104	PHYSICAL &FUNCTION ALDIAGNOSIS	CO1: Recall the key principles and techniques of physical examination for various body systems CO2: Demonstrating assessment tools and diagnostic methods CO3: Describe the physiology of nerve impulse, motor unit, its electro-physiological character and acquire the skill of performance andinterpretationof variouselectro-diagnostictestsintheassessmentofperipheralnervelesions CO4: Evaluate the reliability and validity of various physical assessment tools, considering their utility in different patient populations and clinical settings.

5.ORTHOPADICS(FPB130105)

ORTHOPADICS(TRAUMATIC)

OBJECTIVES

Attheendofthecourse,thestudentwillbeableto

1. Discussthecliniclamanifestationsandconservative/surgicalmanagementofvarioustraumaticandcoldcasesofthemusculo-skeletalconditions
2. Traumaticincludingbothoperativeandnon-operative
3. Gaintheskillofclinicalexaminationandinterpretationofthepreoperativecasesandallthepost-operativecases
4. Readandinterpretsalientfeaturesofthex-rayofthespineandextremities,andcorrelatethe radiologicalfindingswiththeclinical findings.

Syllabus

1. **Introduction:** Fracture, dislocation and injuries of the upper limb. Briefly mention generalprinciplesofOrthopedicsurgery,definitionandscope,briefhistory
2. **Fracture&dislocations:**Causes,types,mechanisms,displacement,generalsymptoms,healing,principles of treatment, complications, malunion, delayed union, non-union, myositisossificans,Volkmann'sischemiccontracture,Fatembolism,Sudeck'sosteodystrophy
3. **Injuries to the hand:** Types (open, closed), principles of treatment, injuries to the phalanges,sprains, dislocations of MP & IP joints, fractures of the phalanges, metacarpals, Bennet'sfracture,malletfinger,tendoninjuries(flexor&extensor)

Wrist & Forearm injuries: Wrist dislocation, Colle's fracture, displaced epiphysis,Smith'sfracture,Barton'sfracture,injuriestocarpal,scaphoidandsprains,fracturesofforearmbones–greenstickfracture. Infraction injury, bothbone

fracture,Galleazi,Monteggiafracturedislocation

4. **Injuriestotheelbow:**Traumaticsynovitis,sprain,dislocationofelbowjoint

5. **Fracturesinvolvingelbowjoint:**Supracondylarfracture,intercondylarfracture,fracturemedial epicondyle,fractureoflateralcondyle,myositisossificans,Volkmann'sischaemiccontracture,fracture ofthe headoftheradius,fractureofolecranon

6. **Injuries of shoulder and arm:** Fractures of the proximal end, neck and shaft of humerus,fractures of clavicle,acromioclavicularandsternoclaviculardislocations,fractures of thescapula

7. **Injuries of the spine:** Injuries to the cervical spine (Both upper and lower), atlanto-axialinjuriesDorsoLumbarspine:classification,mechanismandtypesof injuries,stablefracturewithout paraplegia,fracturedislocation withparaplegia,managementoffracture,managementof paraplegia,bedsore,andbladdercare

8. **Injuriesofthepelvis:**Fractures,itsmechanism,classification,management,Fracturesofacetabulum,sacrumandcoccyx

9. **Injuries of the lower limb:** Dislocations of the hip joint, intracapsular andtrochantricfractures of femur, fractures of the neck of femur, fracture of the shaft of femur, fracturefemur inchildren
   Fractureoffemoralcondyles,tibialcondylesandpatella.Injuriestoextensormechanism, contusion, haemarthrosis, knee joint dislocation and traumatic dislocationofpatella

   Fracture and fracture dislocation of ankle, epiphyseal injury lower end of tibia Foot-fractureoftalus,calcaneum,metatarsals,andphalanges

10. **Soft tissue injuries:** Ligamentous injuries of ankle, knee and injury toMuscles.Orthopaedic splints and appliances for injuries to muscles andtendons

11. **Tendontransfer:**Principles, indications,commontendontransfersurgeries

12. **Amputation :**Types, site, ideal stump, complications, general principles oftreatmentUpperextremityandlowerextremityamputations– prosthesisandprostheticservice

Principles of operative management,indications,andcontraindications forarthroplasty,osteotomy,arthrodesis,spinalstabilization,arthroscopy

13. **Limbreattachment:**Principles,indications,technique.

Clinical:OperationTheator(O.T.)Visit

ORTHOPADICS(NON-TRAUMATIC)

OBJECTIVES

Attheendofthecourse,thestudentwillbeableto

1. Discussthepatho-physiology,clinicalmanifestationsandconservative/surgicalmanagementofvariousnon-traumaticcases ofthemusculo-skeletalconditions
2. Non-traumaticincludingbothoperativeandnon-operative
3. Gaintheskillofclinicalexaminationandinterpretationofthepreoperativecases
4. Readandinterpretpathological/biochemical studiespertainingtoorthopedicconditionsandcorrelatethe radiologicalfindingswiththeclinicalfindings

SYLLABUS

1. GeneralOrthopedics

a) Clinical examination of an orthopedicpatient,investigations,radiological

andimagingtechniques(salientfeatures)

b) Deformities,acquireddeformities,causesandprinciplesofmanagement,splinting
c) Traction:procedures,materials
d) Preventiveorthopedics
e) Geriatricorthopedics

2. Congenitaldisorders

a) Torticollis,wryneck,kyphosis,lordosis,scoliosis,spinabifida,myelomeningocele,congenit aldislocationofhip,congenitalgenurecurvatum,talipesequinovarus
b) Elevationofscapula,madelung'sdeformity,coxavara
c) Endocranialdystosis,superiorradio-ulnadysostosis,sternocleidomastoidtumor

3. Infectionofbones&joints

a) Osteomyelitis(acuteandchronic),Brody'sabscessasacomplicationofopenfracture
b) Skeletaltuberculosis,principlesoftreatment,T.B.ofshoulder,elbowandwristT.B.ofhip,kneeankle ,andfoot
c) Dactylitis,cariesrib

4. Arthritis

a)Acutepyogenicarthritis,septicarthritisofinfancy,smallpoxarthritis,Syphilicinfectionofjoint,Rheumat oidarthritis,osteoarthritis

5. Bonetumors

a) Classification, true bone tumors- osteosarcoma, giant cell tumor, Ewing's sarcoma,chondroblastoma, chondrosarcoma,fibrosarcoma, lymphomaofbone,plasmacytoma
b) Bonemetastasis:synovialsarcoma,hemangiomaof bone,adamanatinomaoflongbonesandchondroma
c) Tumor likelesions:osteoidosteoma,benignosteoblastoma,nonosteogenicfibroma,osteoma,osteochondr omaandenchondroma

6. NeurologicalandMusculardisorders

a) Definition,causes,clinicalfeature,complications,management(Multidisciplinary approach)

medicalandsurgicalofthefollowingconditions:Cerebralpalsy, Poliomyelitis, Leprosy
b) Musculardystrophy–typesandtreatment
c) Injuriestoplexusandnerves:Radial,Ulnar,Median, Brachialplexus,SciaticandLateralPopliteal

7. RegionalconditionsofSpineandLowerlimb

a) Back:Kyphosis,Scoliosis,Spondylolisthesis,Lumbosacralstrain,intervertebraldiscprolapse,fibrositisback,Lumbar canalstenosis,sacroiliacstrain, spondylosis, spondylolysis
b) Hip:Slippedcapitalfemoralepiphysis,idiopathicchondrolysisofhip
c) Knee:Genuvalgum,genuvarum,tibiavarum,genurecurvatum,quadricepsfibrosis,recurrentdislocation of patella, bursa around the knee, loose bodies in the knee,chondromalaciapatella
d) Foot:Painfulheel,Plantarfascitis,Posteriorheelpain,flatfoot,footstrain,paininforefoot,Halluxvalgus,anteriormetatarsalgia

8. RegionalconditionsofNeckand Upperlimb

a) Neck:Cervicalspondylosis,intervertebraldiscprolapse,Cervicalrib,torticollis,Brachialgia
b) Shoulder:Supraspinatustendinitis,calcification,ruptureofrotatorcuff,periarthritisshoulder,deltoidfibrosis,subarachnoidbursitis,Bicepitaltendinitis
c) Elbow:Tenniselbow,Golferselbow,recurrentslippingofulnarnerve,cubitusvarusandvalgus
d) WristandHand:Ganglion,Dequervainsdisease,triggerfinger,triggerthumb,carpaltunnelsyndromeandDupuytren'scontracture
e) Miscellaneous:metabolic disease,rickets, osteomalacia, osteoporosis,parathyroidosteodystrophy,scurvyetc.

TopicDistributionforPaperSetting	
Section	**Topics**
I	Orthopedic(Traumatic)
II	Orthopedic(Non-Traumatic)

CourseCode	**CourseName**	1.**CourseOutcome**
FPB130105	ORTHOPADICS (TRAUMATIC) & ORTHOPADICS(NON-TRAUMATIC)	CO1: Recall common orthopaedic conditions and musculoskeletal disorders CO2: Gaintheskillofclinicalexaminationandinterpretationofthepreoperativecase sandallthepost-operativecases CO3: Read and interpret salient features of the x-ray of the spine andextremities,andcorrelatetheradiologicalfindings with theclinicalfindings. CO4: Apply knowledge of orthopaedics to conduct thorough musculoskeletal assessments, identifying impairments, functional limitations, and participation restrictions

6.PREVENTIVE&SOCIALMEDICINE(FPB130106)

OBJECTIVES:-

Attheendofthecoursethecandidatewillbeableto

1. Describetheconceptofhealthanddiseases,naturalhistoryofdiseases
2. Describethehealthadministrationatvariouslevels(centreandstate),healthcaredelivery aturbanandruralareas
3. Describe the health problems of vulnerable groups and

nationalhealthProgrammes

4. Explainprinciplesandphilosophyofhealtheducationandhealtheducationtools
5. Describetheroleofvarioushealthagencies,ngosatinternationalandnationallevel
6. Identifyoccupationalhealthhazardsanditsmanagement

SYLLABUS:-

1. **Generalconceptofhealth&disease**

Withreferencetonaturalhistoryofdiseasewithpre-pathologyphase

2. **Theroleofsocialeconomicsincommunities**
3. **Epidemiologyandscope**
4. **Publichealthadministration**

Overallviewofthehealthadministrationsetupandcentralandstatelevels.Healthcaredeli veryprogramsinurbanandruralareas,health,andpopulationstatistics

5. **Thenationalhealthprograms**

Highlightingtheroleofsocial,economicandculturalfactorsintheimplementationoftheNationalprograms

6. Healthproblemsofvulnerablegroups

Pregnantandlactatingwomen,infantsandpre-schoolchildren,occupationalGroupsandgeriatrics

7. Occupationalhealth

a) Definition,scope,occupationaldiseasesandhazards

b) Social security andothermeasuresfor the protection from occupationalhazards,accidents,anddiseases

8. Familyplanning

a) Objectivesofnationalfamilyplanningprogramsandfamilyplanningmethods

b) Generalideaofadvantagesanddisadvantagesofmethods

9. Mentalhealth

Communityaspectsofmentalhealth:roleofphysiotherapists/therapistsinMentalhealthproblemssuchasmentalretardation

10 .NutritionandHealth

Classificationoffoods,nutritionalprofilesofprincipalfoods,nutritionalproblemsinpublicHealth,communitynutritionprogrammers

11. EnvironmentandHealth

Componentsofenvironment,waterandairpollutionandpublichealth:Pollutioncontrol,disposalofwaste,medicalentomology

12. Communicablediseases

13. An overall viewof communicable diseasesclassified according toprincipal modeofTransmission.Roleofinsectsandothervectors

14. Internationalhealthagencies

15. Principlesandprocessofcommunication

16. IEC(InformationEducationandCommunication)

17. Healtheducation

a) Philosophy,mainprinciplesandobjectives

b) Methodsandtoolsofhealtheducationindividualandgroupmethods

c) Theroleofprofessioninhealtheducation

d) Roleof otherpersonal inhealth education,co-ordination and co-operation,healthEducationwithothermembersofthehealthteam

e) Elementsofplanninghealtheducationprogrammes

18. Hospitalwastemanagement

Sourcesofhospitalwaste,healthhazards,wastemanagement

19. DisasterManagement

Naturalandmanmadedisasters,disasterimpactandresponse,reliefphase,Epidemiologic surveillance and disease control, nutrition,rehabilitation,Disasterpreparedness

CourseCode	**CourseName**	1.**CourseOutcome**
FPB130106	PREVENTIVE&SOCIALMEDICINE	CO1: Recall key principles of preventive medicine, including health promotion, disease prevention, and community health strategies CO2: Explain the social determinants of health and their impact on individual and community well-being, understanding the broader context of healthcare. CO3: Apply principles of preventive and social medicine to design and implement community-based health programs, considering cultural, economic, and environmental factors CO4: Explainprinciplesandphilosophyofhealtheducationandhealtheducationtools

7.RECENTTRENDS (FPB130107)

PROFESSIONALPRACTICE&ETHICS

OBJECTIVES:

Attheendofthecoursethecandidatewillbeableto:

1. beabletounderstandthemoralvaluesand meaningofethics

2. Acquirebedside mannersandcommunicationskillsinrelationwithpatients,peersseniorsandotherProfessionals.

3. beabletodeveloppsychomotorskillsforphysiotherapistpatientrelationship.

4. Skilltoevaluateandmakedecisionforplanofmanagementbasedonsocioculturalvaluesandreferral practice.

5. beabletodevelopbehavioralkillsandhumanitarianapproachwhilecommunicatingwithpatients,relatives,societyatlarge andco-professionals

6. beabletodevelopbedsidebehavior,respect,&maintainpatients'confidentiality.

SYLLABUS:-

1. Collecting data on psychosocial factors inMedicine/Surgery/ReproductiveHealth/Pediatrics

2. Interprofessionalcommunication

3. Ethicsinclinicalpractice

10.1EVIDENCEBASEDPRACTICE&ICF

OBJECTIVES:-

Attheendofthecoursethecandidatewillbeableto

1. UnderstandconceptofEvidenceBasedPracticeanditsimpl

ementationinPhysiotherapy

2. Search,reviewandusetheevidencesinPhysiotherapy

SYLLABUS:-

FindingtheEvidence

MeasuringoutcomesinEvidenceBasedPractice,measuringhealthoutcomes,measuringcli nicaloutcomes,inferentialstatisticsandcausation

SearchingfortheEvidence

Askingquestions,identifyingdifferentsourcesofevidence

AssessingtheEvidence

Evaluating the evidence; levels of evidence in research using quantitative methods, levels ofevidenceclassification system, outcome measurements, biostatistics, the critical review ofresearchusingqualitativemethods

Systematicallyreviewingtheevidence

Stagesofsystematicreviews,Metaanalysis,theCochranecollaboration

Usingtheevidence

Buildingevidenceinpractice,criticallyappraisedtopics(CATs)

InternationalClassificationofFunction,Disability,andHandicap

FINALYEARBACHELOROFPHYSIOTHERAPY

1.PHYSIOTHERAPYINNEUROLOGICALCONDITIONS (FPB140101)

OBJECTIVES

Attheend ofthecourse,thecandidate will be able to

1. Acquire theknowledge of normal neurodevelopmentwithspecificreferenceto locomotion.
2. Assess, identify and analyze neuro motor and psychosomatic dysfunction in terms of alteration inthe
   muscletone,power, coordination,involuntarymovements, sensations, perceptionsetc.
3. Correlate the assessment findings with provisional diagnosis and investigations such as EMG/NCSand arrive at Physical and functional diagnosis with clinicalreasoningin various neuromusculardisorders.
4. Plan, prescribe and execute short term and long-term treatment with special reference to relief ofneuropathic and psychosomatic pain and use of various physiotherapeutic techniques/ modalities,includingergonomicadviceandparenteducationinneuropediatriccases
5. Prescribe appropriate orthoses/splints and fabricate temporary protective and functionalsplints.

SYLLABUS:-

1. Reviewofbasicneuroanatomyandphysiology
2. Physiotherapytechniquestoimprovetone,voluntarycontrol,co-ordination
3. Neuro physiotherapeutic Techniques: Concepts, principles, techniques and effects of:NDT,PNF, Brainstorm movement therapy, Vojtatherapy, Rood'ssensory motor

approach,Contemporarytask-orientedapproach.

4. Application of skills as PNF, co-ordination, functionalre-education,balancing exercisebyusingtechniquesbasedonneurophysiologicalprinciples.
5. Toolsusedforneurorehabilitationlikevestibularballs,tiltboardetc..
6. Applicationoftransfer,functionalre-educationexercises&gaittraining
7. Bladdertraining.
8. Developingaphilosophyforcaring.
9. Prescriptionofappropriateorthoticdevices&fabricationoftemporarysplints
10. Liftingtechniques,wheelchairmodifications,adaptivedevices.
11. Ergonomicadviceforprevention/rehabilitationtothepatients/parents/caregivers
12. Educationabouthandlingofapatient.

13. PediatricNeuro-physiotherapy

UseofvariousNeurophysiologicalapproaches& modalities inhigh-risk babies, minimum brain damage, developmental disorders, Cerebral palsy, Down's syndrome,Hydrocephalus, Spinabifida

14. Assessment&managementofbrainDisorders

Stroke, Meningitis, Encephalitis, Head Injury, Parkinson's disease, parkinsonism syndromes,Multiple sclerosis,Brain tumors

15. Assessment&managementofspinalcordlesionsandbladderdysfunction

Multiplesclerosis,transversemyelitis,Poliomyelitis/PPRP,syringomyelia,spinalcordinjuryandsub-acutecombineddegenerationofspinalcord,Motorneurondisease(ALS,SMAand other types),spinaltumors

16. Assessment&ManagementofCo-ordinationDisorders

Ataxia,Friedriech'sataxia,Cerebellarataxia,Sensoryataxia

17. Assessment&ManagementofMuscleDisorders

Musculardystrophy(DMD)&othermyopathies

18. Assessment&Managementofdisordersofneuromuscularjunction

MyastheniaGravis

19. Assessment&managementofneuropathiesandnerveinjuries

Emphasison5th,7thand8thcranialnerves,Peripheralnerves,Polyneuropathy-ClassificationofPolyneuropathies

20. pre-andpost-surgicalassessment&managementinneurosurgery

Hydrocephalusandmyelomeningocele,C.V.junctionanomalies,syringomyelia

21. Electrodiagnosticproceduresandprognosisinneurologicaldisorders
SDcurves,EMG&NCS.

CourseCode	**CourseName**	3.**CourseOutcome**
FPB140101	PHYSIOTHERAPY INNEUROLOGICAL CONDITIONS	CO1: Recall the major neurological conditions and disorders CO2: Assess neuromotorandpsychosomaticdysfunctionintermsofalterationinthemuscle tone,power,coordination,involuntarymovements,sensations,perceptionsetc. CO3: Demonstrating knowledge of the anatomical and physiological basis of neurological impairments. CO4: Explain the impact of neurological conditions on motor control, sensory function, and cognitive abilities, demonstrating an understanding of the complexity of neurological rehabilitation

2.PHYSIOTHERAPYINMUSCULO-SKELETALCONDITIONS(FPB140102)

OBJECTIVES

1. At the end of the course the candidate will be able to 1. Identify, discuss and analyze the musculoskeletal dysfunction in terms of biomechanical, kinesiological and biophysical basis and correlate the same with the provisional diagnosis, routine radiological and electro physiological investigations and arrive at appropriate physical and functional diagnosis with clinical reasoning
2. Describe as well as acquire the skill of executing short and long term physiotherapy treatment by selecting appropriate modes of mobilization/ manipulation, electrotherapy, therapeutic exercise and appropriate ergonomic advise for the relief of pain, restoration / maintenance of function & / or rehabilitation for maximum functional independence in ADLs at home & workplace
3. Understand the nature of sports injuries, able to evaluate and treat sports injuries, understand the role of physiotherapist in training and rehabilitating a sports person
4. Prescribe appropriate walking aids, orthoses and prosthesis

SYLLABUS:-

Anatomyofbonesandsofttissues(musculoskeletalsystem)

1.Evaluation, interpretation of investigations & functional diagnosis (ICF) with appropriateclinical reasoningfor planning & implementation ofmanagementtechniques

2.Planning,Prescription &Implementationofshortterm&longtermgoalswith clinicalreasoning

3.Documentation

4.Differentphysiotherapeutic techniquesfor functionalrestoration/maintenanceandprevention ofdisability

5. Differentelectrotherapeutictechniquesforreliefofacuteandchronicpain,swelling,woundhealing,re-education withclinicalreasoning

6. Differentphysiotherapeutictechniquestoimprove/maintainmuscleperformance

7. Differentphysiotherapeutictechniquestoincreasejointmobility.

8. Differentphysiotherapeuticstrategiesforcorrection/maintenanceofgoodposture

9. Differentphysiotherapeuticstrategiestoimproveefficiencyandsafetyofgaitpattern

10. Prescriptionofappropriateorthotic&prostheticdevices&fabricationofsimpletemporarysplints.

11. AppropriateHomeProgram&Ergonomicadviceforpreventivemeasures&Functionalefficiencyathome&workplace

12. Physiotherapyapproachintraumatology
Definition of fracture, classification of fracture, signs and symptoms offracture,

healingfracture,factorsaffectinghealing,methodsofreduction,complicationsoffracture

13. Physiotherapyassessmentinfracturecases
Principles of PT management in fractures - Guidelines for fracture treatment during period ofimmobilization andguidelinesfortreatmentafterimmobilization periodPhysiotherapy

and management of upper limb fractures and dislocations, lower limb fracture

andincludingpelvis and spinal fracture

14. Phyisiotherapyassessment &management ofsofttissueinjury
Contusion,sprains,strains,ruptures

15. Physiotherapyassessment&managementofdegenerativeconditions
Osteoarthritis(OA)with emphasizeonKnee,HipandHandcervical spondylosis, lumbarspondylosis

16. Physiotherapyassessment&managementofinflammatoryconditions

Rheumatoidarthritis(RA),ankylosingspondylitis(AS),Still'sdisease,gout,periarthritis,bursitis,synovitis,capsulitis,tendinitis,tenosynovitis,fasciitis, Osgood Schlatterdisease

17. Physiotherapyassessmentandmanagementofinfective Conditions
Tuberculosis (TB) of spine and other major joints, osteomyelitis, pyogenic arthritis,Septicarthritis

18.**Physiotherapy assessment & management of congenital and acquired deformities**Congenital-
CTEV,CDH,Torticollis,pesplanus,pescavus,Sprengel'sscapulaMadelung'sdeformity
Acquired: scoliosis,kyphosis,coxavara,genuvarum,valgumandrecurvatum,wryneck

19. **Physiotherapyassessment &management ofspinalconditions**Spondylolisthesis, Spinal canal stenosis, Spondylolysis, Intervertebral disc prolapse,Sacro-iliacjointdysfunction,CoccydyniaSacralisation,Lumbarisation,Spinabifida occulta

20. Physiotherapyassessment&managementofamputations
Definition, indications, types, levels of amputation of lower and upper extremities, preand post operative assessment and management with emphasize on stump care andbandaging,preandpostprosthetictrainingandcompleterehabilitation

21. Rehabilitationofpatientwithorthopedicsurgery
Preandpost-operativemanagement ofarthroplasty ofallmajor joints,girdlestonearthroplasty,arthrodesis,arthroscopy,oesteotomyReattachmentoflimb

22. Physiotherapyassessment&managementofre-constructivesurgery
CerebralPalsy,poliomyelitis,leprosy

23. Physiotherapyassessment&managementofhandinjury

24. Physiotherapyassessment & management ofmetabolic disorders andhormonalofthebone tissue

Osteoporosis,rickets,osteomalacia

25. **Physiotherapy assessment &managementofmiscellaneousorthopedic conditions**Mallet finger,triggerfinger,Dequerian's disease,metatarsalgia,halluxvalgus,Dupuytren's contracture,thoracicoutletsyndrome,chondromalaciapatellae,ganglion,tenniselbow,plantar fasciitis

26. SportsMedicine

Introduction&classificationofsportsinjuryAet iologicalfactors
PreventionofsportsinjuryFrequencya ndsiteofinjury
Investigationandassessmentinsportsinjury

27. **Management of sports injuries**PharmacologyinsportsR ehabilitationinsports

TopicDistributionforPaper Setting	
Section	**TopicSr.No.**
I(40Marks)	1-20
II(40Marks)	21-27

CourseCode	**CourseName**	5.**CourseOutcome**
FPB140102	PHYSIOTHERAPY IN MUSCULO-SKELETALCONDITIONS	CO1: Identify themusculoskeletaldysfunctionintermsof biomechanical, kinesiological and biophysical basis. CO2: Recall common musculoskeletal conditions and injuries, demonstrating knowledge of anatomy, biomechanics, and tissue pathology relevant to musculoskeletal physiotherapy CO3: Understand the nature of sports injuries, able to evaluate and treatsports injuries, understand the role of physiotherapist in training andrehabilitatingasportsperson Prescribeappropriatewalkingaids,orthoses,andprosthesis. CO4: Apply advanced assessment techniques to diagnose musculoskeletal conditions and design evidence-based rehabilitation programs, considering individual patient goals and needs.

3.PHYSIOTHERAPYINCARDIORESPIRATORY&MEDICAL SURGICALCONDITIONS (FPB140103)

PHYSIOTHERAPYINCARDIO-PULMONARYCONDITIONSOBJECTIVES

Attheendofthecoursethecandidatewillbeableto

1. Identify,discussandanalyze cardiovascular and pulmonarydysfunctionbased onpathophysiologicalprinciplesandarriveattheappropriatephysicalandfunctional diagnosis.

2. Select strategies for cure, care and prevention to adopt restorative and rehabilitativemeasuresformaximumpossiblefunctionalindependenceofapatientathome,workplaceandincommunity

3. Executetheeffectivephysiotherapeuticmeasures(withappropriateclinicalreasoning) withspecialemphasistobreathingretraining,nebulization,humidification,bronchial hygiene,generalmobilizationandexerciseconditioningingeneralmedicalandsurgical conditions

4. Acquireknowledgeof theoverviewofpatientscareattheintensivecarearea,artificial ventilation,suctioning,positioningforbronchialhygieneandcontinuousmonitoring of the patientattheintensivecare area

5. Acquiretheskillofevaluationandinterpretationoffunctionalcapacityusingsimple exercisetolerancetests,symptomlimitedtests

6. Acquiretheskillofbasiccardiopulmonaryresuscitation

SYLLABUS:-

1) **Anatomyandphysiologyofrespiratory&cardiacsystem**
Anatomyofthorax,biomechanicsofthoraciccage,musclesofrespiration,ventilation perfusionmatching /mismatching,compliance

2) **Investigationsandtests**
Submaximal/maximalexercisetolerancetesting, Cardiac & Pulmonaryradiographs,PFT,ABG,ECG,hematologicalandbiochemicalTests

3) **Physiotherapytechniquestoincreaselungvolume**
Positioning,breathingexercises,Neurophysiologicalfacilitationofrespiration,mechanicalaids-Incentivespirometry,CPAP,IPPB

4) **Physiotherapytechniquestodecreasetheworkofbreathing**Measures tooptimizethebalancebetweenenergysupplyanddemand,positioning,Breathingre-education– Breathingcontroltechniques,mechanicalaids:IPPB,CPAP,BIPAP

5) **Physiotherapytechniquestoclearsecretions**
Hydration, Humidification &Nebulization,Mobilizationandbreathingexercises, postural drainage, Manual techniques: Percussion, vibration andshaking,ACBT,AutogenicDrainage,Mechanicalaids:PEP,Flutter,IPPB,facilitationofcough andhuff,suctioning

6) **PhysiotherapyincommoncomplicationsfollowingsurgeryAndDrugtherapy**
Drugs to prevent and treat inflammation, drugs to treat bronchospasm,drugs to treat breathlessness, drugs to help sputum clearance, drugs toinhibit coughing, drugs to improve ventilation, drugs to reduce pulmonaryhypertension,drugdeliverydoses,inhalersandnebulizers

7) **IntroductiontoICU&mechanicalventilator**
ICUmonitoring–apparatus,airwaysandtubesusedintheICU-Physiotherapy in theICU – common conditions in the ICU. Mechanicalventilator:types,modesofventilator,advantagesanddisadvantagesOxygentherapy,CPR,asepticprecautions
advantagesanddisadvantagesOxygentherapy,CPR,asepticprecautions

8) Physiotherapyassessment&managementtechniquesinObstructivelungconditions

Chronicbronchitis,emphysema,asthma,bronchiectasis,cysticfibros

9) Physiotherapyassessment&managementtechniquesinRestrictive lungconditions

Ribfracture,Pleuraleffusion,pleurisyandempyema,pulmonaryembolism,pulmonary tuberculosis,atelectasis,pneumothorax,bronchopulmonaryfistula,pneumonia,ARDS

10) PhysiotherapyfollowingLungsurgeries

PreandpostoperativephysiotherapyassessmentandmanagementinLobectomy,Pneumonectomy,decortication,thoracoplasty

11) PulmonaryRehabilitation

Definition,aimsandobjectives,teammembers,benefits,principlesofexerciseprescriptionandtechniquesof rehabilitation

12) Anatomyandphysiologyofcardiovascularsystem

Anatomy,bloodsupplyandconductionsystemofheart

13) Physiotherapyassessment&managementfor cardiovasculardisorders Cardiovasculardisease,congestiveheartfailure,myocardialinfarction,valvulardiseasesofheart,cyanoticandacyanoticcongenitalheartdiseases,endocarditis

14) CardiacRehabilitation

Definition,aimsandobjectives,teammembers,benefits,principlesofExerciseprescriptionandtechniquesof rehabilitation

15) Physiotherapyassessment&managementofvasculardiseases

Venous:Thrombosis,phlebitisandphlebo-thrombosis,varicoseveins,DVT,venousUlcersArterial:Berger'sdisease,acuteandchronicarterialocclusion,lymphedema

PHYSIOTHERAPYINGENERALMEDICAL-SURGICAL CONDITIONS

OBJECTIVES:-

1. Acquire knowledgeofrationale of basicinvestigativeapproachesinthemedical

system
andsurgicalintervention regimes relatedtocardiovascularandpulmonaryimpairment

2. Select strategies for cure, care and prevention to adopt restorative andrehabilitative measures for maximum possible functional independence of apatientat home, work placeandincommunity

3. Acquire the knowledge of evaluation and physiotherapy treatment for obstetrics andgynecologicalsurgical conditions

4. Acquiretheknowledgeofvariousconditionswherephysiotherapyplaysavital rolein
therehabilitation(psychiatry,dermatologyandENTconditions)

5. Assessthevariousdegreesofburns,planandimplementphysiotherapytechniqu esfor
therehabilitationof aburnandwound patient.

1) Physiotherapyassessment&managementforabdominalsurgeriessurg eriesonuppergastro-intestinaltract- oesophagus- stomach- duodenum,surgeryonlargeandsmallintestine– apendicectomy,cholecystectomy,partialcolectomy, illieostomy,nephrectomy

2) PhysiotherapyAssessment&managementinoncosurgeries
Mastectomy:simple,radical.Hysterectomy,prostatectomy,neckdissection

3) Physiotherapyinobstetricsandgynecologysurgeries
Electrotherapy and exercise therapy measures following pelvic repairandcaesareansection.

4) Wounds,localinfections,ulcers,pressuresores
UVR andotherelectrotherapeuticmodalitiesforhealing ofwound,preventionofhypergranulatedscars,reliefofpainandmobilization

5) Physiotherapyinburns,skingraftsandre-constructiveplasticsurgery

6) PhysiotherapyinENTconditions
Nonsuppurativeotitismedia,chronicsuppurativeotitismedia,otosclerosis,labyrinthitis and

mastoidectomy resulting into facial palsy, laryngectomy, pharyngeo – laryngectomy,tracheostomyanditscare,sinusitis

7) Physiotherapyinskinconditions

Leprosy,acne,alopecia,psoriasis,syphilis

8) Physiotherapyinpsychiatricconditions

Schizophrenia,depression,psychosis,anxiety

9) EmergencyCare

BasicLifeSupport,Firstaid&emergencycare,Biomedicalwastemanagement

TopicDistributionforPaperSetting	
Section	**Topics**
I(55marks)	Cardiorespiratoryconditions
II(25marks)	Medicalsurgicalconditions

CourseCode	**CourseName**	7.**CourseOutcome**
FPB140103	PHYSIOTHERAPY IN CARDIORESPIRATORY &MEDICALSURGICALCONDITIONS	CO1: Identifycardiovascularandpulmonarydysfunction based on pathophysiological principles and arrive at theappropriatephysicalandfunctionaldiagnosis. CO2: Explain the physiological responses to cardiorespiratory conditions and the impact on functional capacity, demonstrating an understanding of the challenges in cardiorespiratory rehabilitation. CO3: Acquire knowledge of the overview of patients care at the intensivecarearea,artificialventilation, suctioning,positioningforbronchialhygiene and continuous monitoring of thepatient at the intensive carearea. CO4: Apply advanced assessment techniques to evaluate cardiorespiratory function and design individualized exercise and respiratory interventions for patients with diverse conditions.

4. COMMUNITYPHYSIOTHERAPYREHABILITATIONANDASSISTIVE TECHNOLOGIES (FPB140104)

COMMUNITYPHYSIOTHERAPYREHABILITATION

OBJECTIVES: -

Attheendofthecourse,thecandidatewillbeableto

1. DescribethegeneralconceptsaboutHealth,Disease&Physicalfitness
2. Describe policies for the rehabilitation of disabled and Role of Council to promotephysiotherapyasahealthdelivery system
3. Describe the strategies to assess prevalence & incidence of various conditions responsiblefor increasing morbidity in the specific community, role of physiotherapy in reducingmorbidity, expectedclinical&functionalrecovery,reasonsfornon-complianceinspecificcommunity &Environmentalsolutionforthesame
4. Describetheevaluationofdisability&planningforprevention&rehabilitation
5. Describe CBR in urban & rural set up, WHO policies, conceptofteamwork,role ofmulti-purposehealth worker
6. (cultural)factors,causinghighrisk,responsibleforvariousdysfunctions&morbidity relatedtolifestyle&specificcommunitylikewomen,aged,industrialworkers & describeplanningstrategiesofinterventional policiesto combatsuchproblems.

SYLLABUS: -

1) Conceptsofcommunityhealth

Preventive,promotive,restorativeandrehabilitativeWHO definitionofhealthanddisease
Healthdeliverysystem-3tier

2) Disabilitytypes

Physical &Psychological Evaluation,prevention & Legislation related to PersonswithDisability(PWD)

3) CBR

Definition,principles,types(institutional,reachoutandcommunity),concepts,WHOpolicies Principles of Team work of medical practitioner, Physiotherapist, Occupational Therapist,Speech & Audiology Therapist, Prosthetist & Orthotist, Clinical psychologist, vocationalcounselor and social worker. Role of Physiotherapy in team, conceptofmultipurposehealthworker,roleofPhysiotherapyandstrategiesin3tierHealthdeliverysystem,communicationstrategies.

4) HealthCare

a) Prevention,Promotion&Restoration
b) Inperi-pubertalagegroup
c) Inwomen-pregnancyandmenopause
d) In Geriatrics-neuromusculoskeletal, cardiovascular, pulmonary, metabolic anddegenerativeconditions
e) InObese/overweight
f) InCardiovascularandPulmonaryconditions
g) InDiabetes
h) Healthpromotionforall

5) Womenandchildcare

a) Antenatalexercises,SpecificBreathingexercises,Relaxation,Posturaltraining,Pelvicfloor strengtheningexerciseswith clinicalreasoning
b) Physiotherapyduringlabor
c) Postnatalexercisesprogramafternormallabor/laborwithinvasiveprocedureswithclinical reasoning
d) Menopause-Osteoporosis,Mentalhealth,Physiotherapymanagement
e) Pretermbabies
f) Adolescentagegroup
g) Nutritionaldisordersinwomenandchildren

6) Geriatrics

Physiologyofaging,environmentalchangesandadaptations,balanceandfallsRoleof Physiotherapy ingeriatricpopulation.

7) Physicalfitness

Energysystem,Endurance,AerobicExercise,pacingofactivity.

8) Ergonomics

9) IQTesting

REHABILITATIONANDASSISITIVETECHNOLOGIES

OBJECTIVES:-

Attheendofthecourse,thecandidatewillbeableto

1. Acquireknowledgeaboutbiomechanicalprinciplesofapplicationofvarietyofaids&appliancesusedforambulation,protection&prevention
2. Acquireinbriefknowledgeaboutvariousmaterialsusedforsplints/Orthosis&Prostheses andselectioncriteriafor splints/Orthosis&Prostheses
3. Acquiretheskilloffabricationofsimplesplintsmadeoutoflowcostmaterial.

SYLLABUS: -

1. Introductionandterminology:prosthesisandorthosis
2. Classificationoforthosisandprostheses
3. Bio-mechanicalprinciplesoforthoticapplication
4. Bio-mechanicalprinciplesofprostheticapplication
5. OrthoticappliancesforHip,Knee,Ankle&foot-Prescriptionanddesign&modification
6. Spinalconditionsinclusiveoffractures,spondylolisthesis,kyphosis,scoliosisetc.
7. Upperlimbconditions–splintingprescriptionswithprinciples
8. Prosthesis–
a. Upper&lowerlimb;endoskeletal&exoskeletal,
b. Hip,knee&footprostheticcomponentswithk-levels
c. Upperlimbs:cosmeticrestoration,terminaldevices(bodypowered),selfhelpdevices(adlequipments),myoelectric,microprocessor/sensorcotrolled(externallypowered)
d. Adaptivedevices
9. Psychological&Physiologicalaspectsoforthoticandprostheticapplication
10. MaterialusedinfavbricationofProsthetiscs&Orthoticsbriefly.
11. Mobilityaids:
canes,crutches,walkingframes,walkers,wheelchairsmanual/electricallypowered.

TopicDistributionforPaperSetting	
Section	**Topics**
I(55marks)	**CommunityPhysiotherapyRehabilitation**
II(25marks)	**Assistivetechnologies**

CourseCode	**CourseName**	9.**CourseOutcome**
FPB140104	COMMUNITYPHYSIOTHERAPYREHABILITATION ANDASSISTIVE TECHNOLOGIES AND REHABILITATION ANDASSISITIVE TECHNOLOGIES	CO1: Understand key principles and models of community-based rehabilitation, demonstrating knowledge of the diverse needs of individuals in community settings. CO2: Explain the social determinants of health and their impact on community rehabilitation, understanding the importance of cultural competence and social inclusion. CO3: Describethe evaluation ofdisability & planning for prevention &rehabilitation CO4: Apply principles of community rehabilitation to design and implement programs that address the needs of individuals with disabilities in diverse community settings

5. ETHICSANDMANAGEMENT (FPB140105)

ETHICS

OBJECTIVES:
Attheendofthecoursethecandidatewillbeableto:

1. Understandthemoralvaluesandmeaningofethics.
2. Acquirebedsidemannersandcommunicationskillsinrelationwithpatients,peers seniorsand otherprofessionals.
3. Developpsychomotorskillsforphysiotherapistpatientrelationship.
4. Developskilltoevaluateandmakedecisionforplanofmanagementbasedonsociocultural valuesandreferral practice.
5. Developbehavioralskillsandhumanitarianapproachwhilecommunicatingwith patients,relatives,societyat largeandco-professionals.
6. Developbedsidebehavior,respect&maintainpatients'confidentiality.
7. Understandtheimportanceofcouncil,itsfunctioningandAct.

SYLLABUS: -

1. OutlinesofGujaratStateCouncilforPhysiotherapists(GSCPT)Act2011withmoreemphasison formation,functionsofcouncil,importanceforregistrationetc.
2. Ethicalprinciplesinhealthcareservices,research,teachingrelatedtophysiotherapy.
3. Scopeofpracticeaspatientmanager,consultant,criticalinquirer,educator,administrator.
4. Rulesofprofessionalconduct
- Physiotherapyasaprofession
- Relationshipwithpatients
- Relationshipathealthcareinstitutioni.e.hospital,clinicetc.
- Relationshipwithcolleaguesandpeers
- Relationshipwithmedicalandotherprofessionals

5. Confidentialityandresponsibility
6. Malpracticeandnegligence

7. Professionaldevelopment,competenceandexpertise
8. Saleofgoods:personalandprofessionalstandards
9. Legalaspects:legalresponsibilityofphysiotherapistsfortheiractionintheprofessional
contextunderstandingliability andobligationsincaseof medicolegalaction.

ADMINISTRATION,MANAGEMENT&MARKETING

OBJECTIVES:
Attheendofcoursethestudentwillbeableto:
1. Learnthemanagementbasicsinfieldsofclinicalpractice,teaching,researchandphysiotherapy
practiceinthe community.
2. Acquire communication skills in relation with patients, peers, seniors and otherprofessionals&
thecommunity.
3. Acquiretheknowledgeofthebasicsinmanagerial&managementskills,&useofinformation
technology inprofessionalpractice.
4. Developpsychomotorskillsforphysiotherapypractice.
5. Developskilltoevaluateandmakedecisionforplanofmanagementbasedonsociocultural valuesandreferral practice.
6. Developbehavioralskill andhumanitarianapproachwhilecommunicatingwith
patients,relatives,societyatlargeandco-professionals

SYLLABUS:

1. Managementstudiesrelatedto localhealthcareorganizationmanagement&
structure,planningdeliverywith qualityassurance&funding ofservicedelivery, information
technologyandcareerdevelopmentinphysiotherapy.
2. Administration-principles-based on the goal & functions at large hospital set up/domiciliaryservices/privateclinic/academics.

3. Budget-planning.

4. Performanceanalysis-
physicalstructure/reportingsystem(manpower,status,functions,quantity&qualityofservices,turnover,costbenefitrevenuecontribution)

5. Settinguptherapeuticgymnasium,fitnessclinics,cardiacandpulmonaryrehabcentersetc

6. Timemanagement

CourseCode	**CourseName**	10. **CourseOutcome**
FPB140105	ETHICS ANDMANAGEMENT AND ADMINISTRATION,MANAGEMENT&MARKETING	CO1: Acquire bedside manners and communication skills in relation withpatients,peersseniorsandotherprofessionals. CO2: Understand the fundamental principles of medical ethics and healthcare management, demonstrating knowledge of ethical frameworks, regulations, and organizational structures CO3: Developskilltoevaluateandmakedecisionforplanofmanagementbasedonsocioculturalvaluesandreferralpractice. CO4: Apply ethical reasoning and decision-making skills to analyze and resolve complex ethical dilemmas in physiotherapy practice and healthcare management.

6.BIO-STATISTICS&RESEARCHMETHODOLOGY(FPB140106)

BIO-STATISTICS

OBJECTIVES:-
Attheendofthecoursethecandidatewillbeableto
1. Recognize different variables as per their types and shouldbe able to decideon howtotreat
themdifferentlyasper requirement
2. Differentiate complete enumeration and various forms of sampling (random: Simple,stratified,
cluster, multi stage; non random: snow ball, quota, purposive, convenient) withunderstandingof
meritsanddemeritsofthem
3. Decide when to apply what test or a measure of centraltendency according to the need ofthedata
andOBJECTIVES
4. InterpretagivenoutputofregressionorANOVAaccordingtothecontext.

SYLLABUS:-

1. Introductiontostatisticsinphysiotherapy.
2. Understanding‘Data’anditstypes.
3. Presentationofvariousdata:tables,graphsanddescriptivestatistics.
4. Measuresofcentraltendencies(CT):mean,median,mode;meritsanddemerits;whento applywhichmeasureof CTfor thegivendata.
5. Measuresofdispersion:range,meandeviation,standarddeviation,coefficientofvariance
6. Applicationofnormaldistributionanditsproperties.
7. Testing of hypothesis (measuring change):one sample with population, comparing twosamples(Z test for proportion, difference of two proportion, independent sample ‘t’ test,paired‘t’test,chisquaretest.
8. Conceptual understanding of correlation, linear and multiple regression,analysisofvariance
(ANOVA)andanalysisofco-variance(ANCOVA).

9. Complete enumeration and sampling methods: random: simple, stratified, cluster, multistage;
nonrandom:snowball,quota,purposive,convenient.
10. Simplestatisticalanalysisthroughexcel.

RESEARCHMETHODOLOGY

OBJECTIVES:
Attheendofthecoursethecandidatewillbeableto
1. Understanddifferentiatevariousstudydesigns.
2. Listtheneedofmethodicalandregularliteratureresearchinresearch
3. Planastudychoosinganappropriatedesignforagivenproblemaccordingto givenobjectives.

SYLLABUS:-
1. Whatisresearch?Whyresearch?
2. Typesofepidemiologicalstudies&measurementsofvariousindications.
3. Possibleerrorsthatmaygenerateduetostudydesign&howtoovercomethem.
4. Howtoreadandwhattoreadfromjournals.
5. RoleofresearchinPhysiotherapy.
6. Componentsofresearchproposal– introductionandrationale,material&methods,resultsanddiscussion.
7. Wheretolookforgoodliteratureandwhy.
8. TheEvidenceBasedPractice.

CourseCode	CourseName	11. CourseOutcome
FPB140106	BIO-STATISTICS&RESEARCHMETHODOLOGY AND RESEARCH METHODOLOGY	CO1: Describe key statistical concepts, research design principles, and methodologies relevant to physiotherapy research. CO2: Explain the fundamental principles of biostatistics, including probability, hypothesis testing, and statistical inference, understanding their applications in research. CO3: Apply statistical techniques to analyze and interpret data from physiotherapy research studies, demonstrating proficiency in using statistical software. CO4: Analyze research methodologies and study designs in physiotherapy literature, understanding the strengths, limitations, and potential biases in research studies.

FPB110101 HUMAN ANATOMY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	2	2	2
CO2	3	1	2	1	2	3	2	2
CO3	3	1	2	1	2	2	2	2
CO4	2	2	2	1	2	1	2	1

FPB110102 HUMAN PHYSIOLOGY & BIOCHEMISTRY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	1	2	2	2	2	2
CO2	3	3	2	1	3	3	2	2
CO3	3	1	2	2	3	3	1	3
CO4	2	2	2	1	2	1	2	1

FPB110103 PSYCOLOGY & SOCIOLOGY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	2	2	2	2	2	3	2	2
CO2	3	3	2	1	2	3	2	2
CO3	3	3	2	1	2	2	2	2
CO4	2	2	3	1	3	1	3	3

FPB110104 EXERCISE THERAPY I & SOFT TISSUE MANIPULATION								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	2	2	2	2	2	3	2	2
CO2	3	3	1	1	2	3	2	3
CO3	3	3	2	3	3	3	3	3
CO4	3	3	3	1	2	1	1	1

FPB110105 BIOMEDICAL PHYSICS								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	3	2	1
CO2	3	3	1	2	2	3	2	3
CO3	2	2	2	3	3	3	1	1
CO4	3	3	3	1	3	1	3	1

FPB120101 PATHOLOGY & MICROBIOLOGY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	3	2	2
CO2	3	3	1	2	2	3	2	3
CO3	2	2	2	1	3	3	1	1
CO4	3	3	3	3	3	1	3	1

FPB120102 PHARMACOLOGY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	2	2	2	2	2	2	2	2
CO2	3	1	1	3	2	2	2	3
CO3	3	3	1	1	3	1	3	1
CO4	3	3	3	3	3	1	3	3

FPB120103 EXERCISE THERAPY II								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	2	2	2	2	2	2	2	2
CO2	3	1	1	2	3	2	2	3
CO3	3	3	1	1	3	1	3	3
CO4	3	2	3	3	3	3	3	1

FPB120104 KINESIOLOGY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	1	2	2	2	2	2	2	2
CO2	3	1	1	3	1	2	2	3
CO3	3	3	1	1	2	1	3	1
CO4	3	3	2	3	3	3	3	3

FPB120105 PSYCHIATRY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	2	2	2
CO2	3	3	1	2	3	2	3	2
CO3	2	3	2	1	3	1	3	3
CO4	3	2	2	3	3	3	3	3

FPB120106 ELECTROTHERAPY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	2	2	3
CO2	3	1	1	3	2	2	2	2
CO3	2	3	1	1	3	1	3	1
CO4	3	3	2	3	3	3	3	3

FPB130101 GENERAL MEDICINE, SKIN & VD								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	2	2	2
CO2	2	1	1	3	3	2	3	2
CO3	2	2	2	1	2	3	2	1
CO4	3	3	2	3	3	1	3	3

FPB130102 NEUROLOGY & PEDIATRICS								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	2	3	2
CO2	3	1	1	3	3	2	3	2
CO3	3	3	3	1	2	3	2	3
CO4	3	2	3	3	3	1	3	3

FPB130103 SURGERY, OBSTETRICS AND GYNECOLOGY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	2	2	2	2	2	2	2
CO2	2	1	1	3	2	2	1	1
CO3	2	2	3	1	2	3	3	2
CO4	2	3	2	3	3	3	3	3

FPB130104 PHYSICAL & FUNCTIONAL DIAGNOSIS								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	2	2	2	2	2	2	2	2
CO2	2	3	1	2	1	2	1	1
CO3	3	3	3	1	3	3	3	2
CO4	2	3	2	3	3	3	3	3

FPB130105 ORTHOPEDICS								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	2	2	2	2	1	2	1	2
CO2	3	3	1	2	2	2	2	1
CO3	3	2	2	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3

FPB130106 PREVENTIVE & SOCIAL MEDICINE								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	3	3	2	1	1	1	2
CO2	2	1	2	2	3	2	3	3
CO3	2	2	2	3	3	3	3	3
CO4	3	2	1	2	3	3	3	3

FPB140101 PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	3	2	2	1	2	1	2
CO2	1	3	2	2	3	2	2	3
CO3	2	2	2	1	2	3	2	1
CO4	3	2	1	2	3	3	3	2

FPB140102 PHYSIOTHERAPY IN MUSCULOSKELETAL CONDITIONS								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	1	2	1	1	1	1	2
CO2	3	2	2	2	3	2	2	1
CO3	3	3	3	3	2	3	3	3
CO4	2	3	1	3	3	3	3	3

FPB140103 PHYSIOTHERAPY IN CARDIO RESPIRATORY & MEDICAL SURGICAL CONDITIONS								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	1	2	1	1	1	1	2
CO2	3	2	2	2	2	2	2	1
CO3	3	3	3	3	3	3	3	3
CO4	2	3	3	3	3	3	2	3

FPB140104 COMMUNITY PHYSIOTHERAPY REHABILITATION AND ASSISTIVE TECHNOLOGIES								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	1	2	1	3	2	3	3
CO2	2	2	2	2	2	3	3	3
CO3	2	3	3	3	3	3	3	1
CO4	2	3	3	3	3	3	2	2

FPB140105 ETHICS AND MANAGEMENT								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	1	2	1	2	2	1	2
CO2	3	2	3	2	2	1	2	3
CO3	2	3	3	2	1	2	2	1
CO4	1	3	3	3	2	2	3	3

FPB140106 BIOSTATISTICS & RESEARCH METHODOLOGY								
CO	PO							
	PO1 KNOWLEDGE	PO2 LEARNING SKILLS	PO3 PROFESSIONAL ETHICS	PO4 ANALYTIC SKILLS	PO5 SOCIAL AWARENESS	PO6 LIFE LONG LEARNING	PSO1	PSO2
CO1	3	1	2	3	2	2	1	1
CO2	3	2	1	3	2	1	2	1
CO3	2	2	2	2	1	3	2	2
CO4	2	3	2	3	2	2	3	3