ROYAL GLOBAL UNIVERSITY
GUWAHATI

(ROYAL SCHOOL OF MEDICAL & ALLIED SCIENCES)

(RSMAS)

(NAME OF DEPARTMENT: PHYSIOTHERAPY)

SYLLABUS

&

COURSE STRUCTURE

BACHELOR OF PHYSIOTHERAPY

SESSION 2019-20

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1. UGC- LOCF at Royal School of Medical and Allied Sciences:

Royal School of Medical and Allied Sciences imbibes a Learning Outcome-based Curriculum Framework (LOCF) for its Under Graduate program - Bachelor of Physiotherapy (BPT) from the new academic session which will make learning more student centric, interactive and outcome oriented with well defined aims, objectives and goals. The LOCF approach is envisioned to provide a focused, outcome-based syllabus at the program level with an agenda to structure the teaching-learning process in such a way that the students obtain the much needed 21st Century skills like critical thinking, problem solving, analytical reasoning, cognitive skills, self directed learning's among other such skills. In short, the main focus of the Program is to prepare the graduate level students in the best possible way for both, academia and employability.

The new curriculum will offer students with relevant core papers that help build their foundation in the area of management. The choice of generic electives and skill enhancement courses will enable students to pursue an area of their interest in the field of management & its allied fields . The contents of each course have been carefully designed to prepare students with knowledge and skill sets that will not only make them industry ready but also foster entrepreneurial and innovative thinking.

In order to achieve the program goals following measures would be adopted:

(i) Regulatory curriculum reform based on a Learning Outcomes-based Curriculum Framework (LOCF);

(ii) Enriching the quality of teaching and research;

(iii) Enlightening learning environment through ICT based hands-on approach to students;

(iv) Involving students in discussions, problem-solving, and out of the box thinking;

(v) Motivating the learners to understand various concepts of management and apply them in real life situations.

2. Aims & Objectives of Bachelor of Physiotherapy (BPT) Program in Royal School of Medical and Allied Sciences:

The curriculum of BPT is planned to have the following aims & objectives:

(i) The progression of the program and structure will enable students to build on their learning in a systematic manner leading to critical evaluation and application of the concepts to the real world;

(ii) Build fundamentals in core areas of Anatomy, Physiology, Biomechanics, Orthopaedics, Neurology, Sports injuries, Cardiovascular disorders, Paediatrics, Geriatrics and exposure to diagnosis and treatment of various cases;

(iii) Enabling students to gain advanced exposure in area of their choice through Elective Courses offered;

(iv) Provide a conducive environment inside the campus that holistically engages students through an all- encompassing knowledge impartation;

(v) Widen the scope and depth of the course enabling them to undertake further studies in health and its allied areas on multiple disciplines concerned mainly with the field of Physiotherapy;

(vi) Encourage the learners to advance a range of generic skills helpful in employment, internships, and social activities;

(vii) Sensitize students towards environment through courses on Environmental Science.

(viii) Develop ability to use software for data extractions and analysis through statistical and econometric tools under Skill Enhancement course papers.

(ix) The program encourages students to undertake internship to gain practical insight from hospitals which makes their understanding of courses taught more meaningful.

(x) Through academic exposure, practical training, skill enhancement activities develop students in to becoming successful practitioners/ researchers/ academicians/ entrepreneurs.

3. Framework of Bachelor of Physiotherapy Program

The LOCF program in BPT provides an opportunity for the students to choose courses from the prescribed courses comprising Core, Discipline Specific Elective, Generic Elective and Skill Enhancement Courses. The courses will be evaluated following the grading system, which is considered to be better than the conventional marks system. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations, the UGC guidelines will be followed.

The Outline of Learning Based Curriculum Framework (LOCF) shall be:

(i) **Core Course**: This course is compulsorily to be studied by a candidate as a core requirement in pursuit of a bachelor degree in Physiotherapy.

(ii) **Elective Course:** This course can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the medical and allied courses or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill and , therefore , called as an Elective Course.

Elective Courses has been further classified as under-

(a) Compulsory Generic Elective Course: Elective courses offered by the main discipline/subject of study of management. Four papers will be offered throughout semester III to VI.

(b) Open Generic Elective Course: A student has to choose an Elective Course from an unrelated discipline/subject, with an intention to seek exposure in a wide field of study. Four papers will be offered throughout semester III to VI.

(iii) **Ability Enhancement Compulsory Courses :** These are the courses based upon the content that leads to Knowledge enhancement. They are :

(a) Environmental science

(b) English Communication & Public speaking

(c) Behavioural Science

Ability Enhancement Elective Courses: These are value- based and/or skill-based and are aimed at providing hands-on-training, competencies & desired skills. These courses may be chosen from a pool of courses offered in BPT Program.

4. Graduate Attributes in Bachelor of Physiotherapy

- **Disciplinary Knowledge**

  Building academic excellence of the students through sound knowledge of the courses studied.

- **Communication Skills**

  Presentations, group discussions, role plays and class room discussions form an integral part of the course curriculum. Each student on an individual basis or as group assignment prepares term papers which are presented and reviewed. This teaching pedagogy develops and enhances the communication and presentation skill of students leading to them becoming effective presenters of their innovative ideas/views.

- **Critical Thinking**

  Inculcating an intellectually disciplined process of actively and skill fully conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reasoning, as a guide to action.

- **Problem Solving**

  The Program focuses on well researched and solution based thinking and application of theoretical concepts to real life case studies enabling students to develop problem solving skills. Students develop an ability to take up challenges in their professional carrier and provide effective solutions.

- **Research-Related Skills**

  The students are engaged with their faculty on research projects of current relevance and critical outcome. They work on live projects and collect data on industry for research based projects and term papers. The students are taught the skill of using software for making analysis.

- **Cooperation/Team Work**

  Working on various assignments both academic and extra- curricular help them in becoming team worker. Group projects and presentations and case studies give opportunity to students to learn team skills and understand team dynamics.

- **Scientific Reasoning**

  Case data analysis that is researched/observed or collected through surveys for projects and term papers requires logical thinking and reasoning for arriving at conclusions and analytical outcomes.

- **Reflective Thinking**

  The assessment methods adopted for the courses include presentation on the specified class projects which requires the use of analytical thinking and critical evaluation.

- **Self-Directed Learning**

  Generating among students their curiosity to acquire general knowledge and explore information to make better decisions, develop rational and logical beliefs and thinking. During the course of their study relevant links are shared by faculties with the students for their academic progress, better exposure & updated knowledge of the subjects taught.

- **Multi-cultural Competence**

  Students are enabled to understand the subjects during their classroom discussion. In addition to that they are advised, motivated and facilitated for co-curricular activities to serve the society especially to those at bottom of the pyramid. Further, they are sensitized towards Environmental care which has taken prime position because of the threat caused. This sensitization is through the EVS paper in their second year of study. They are also expected to sensitize the society towards social issues and aspects concerning larger national issues.

- **Moral and Ethical Awareness/Reasoning**

  Courses include sensitization and cultivation of moral and ethical value in students. The program includes courses on ethics and social responsibility. Further through classroom discussions the students are made to understand the importance of adopting ethical practices in pursuit of providing comfort to the patients**.**

- **Leadership Readiness/Qualities**

  Creating an inspiring vision of the future. Accepting team spirit as an important contributor to both personal and professional life. Participate in healthy competition, generation of more ideas, improved productivity

- **Life-long Learning**

  The course also orients the students towards better learning and application of various physiotherapeutical approach in treating patients. This will be possible only when they will update themselves on a daily basis and keep aware of changing environment. Moreover, encouraging students to generate a variety of ideas and responses, across different categories and to look at things from different points of view, generating new ideas and innovation.

5. Qualification Descriptors for Graduates Bachelor of Physiotherapy:

The qualification descriptors suggest that generic outcomes and attributes is to be obtained by the students while obtaining the BPT Degree. These parameters are expected to be attained and demonstrated by the learners after becoming graduate in this program. The learning experiences and assessment procedures thereby are so designed that every graduate in physiotherapy may achieve the program learning outcomes with equal opportunity irrespective of class, gender, community, and regions.

Each graduate in physiotherapy shall be able to:

(i) Gain knowledge and understanding regarding various structures, histological appearance of various organs of the human body.

(ii) Acquire knowledge of the normal physiology of various human body systems and understand the alterations in physiology in diseases and practice of physiotherapy.

(iii) Demonstrate educational skills in areas of Biomechanics, biochemistry, psychology, pathology, microbiology and pharmaceutics and able to practice its application in human body treatment.

(iv) Formulate the concepts of electrotherapy, exercise therapy, mobilization and soft tissue techniques in treating patients.

(v) Acquire various soft skills (like business communication, public speaking etc.) required to manage patient to doctor relationship as well as life situations;

(vi) Apply knowledge, understanding, and skills to identify the difficult/unsolved problems in

rapidly changing environment and to collect the required information from possible range of sources and try to analyse and assess these problems using appropriate methodologies;

(vii) Fulfill one's learning requirements to provide an insight of research in management and allied fields and interdisciplinary areas while seeking research pursuits;

(viii) Apply one's disciplinary knowledge and transferable skills to new/unfamiliar contexts, rather than replicate curriculum content knowledge, to identify and analyse problems and issues and solve complex problems with well-defined solutions;

(ix) Good value systems leading to high ethical and moral conduct in society at large;

(x) Competencies and attitudes.

6. Program Learning Outcomes for Bachelor of Physiotherapy:

The outcomes and attributes described in qualification descriptors are attained by students through learning acquired on completion of a program of study. The term 'program' refers to the entire scheme of study followed by learners leading to a qualification.

Program Learning Outcome will include subject specific skills, and generic skills including transferable global skills and competencies.

(a) Demonstrate a coherent understanding of the human body and diagnosis of various causes of musculoskeletal, neurological, cardio-pulmonary, pediatric and sports injuries.

(b) Use knowledge, understanding and skills for treating various musculoskeletal, neurological, cardio-pulmonary, pediatric and sports injury conditions.

(c) Completion of this program will also enable the learners to formulate business setups, gymnasiums, etc. and provide innovative solutions thus; molding them into future visionaries, management leaders that are compassionate yet efficient.

(d) The course provides an extreme and rigorous base for teaching, research, and allied health science.

(e) Develop innovative thinking and entrepreneurial skills.

(f) Demonstrate subject-related and transferable skills that are relevant for entry level positions in diverse universities and hospitals.

(g) Create a sound foundation for students to pursue higher level studies and research in areas of physiotherapy and health science.

BACHELOR DEGREE IN PHYSIOTHERAPY (BPT)

PROGRAMME STRUCTURE

BPT 1ST SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C101	Anatomy-I	**2**	**1**	**0**	**3**	**3**
2	PHT242C102	Physiology-I	**2**	**1**	**0**	**3**	**3**
3	PHT242C103	Biomechanics-I	**2**	**1**	**0**	**3**	**3**
4	PHT242C104	Biochemistry	**2**	**1**	**0**	**3**	**3**
5	PHT242C111	Anatomy lab-I	**0**	**0**	**2**	**2**	**4**
6	PHT242C112	Physiology lab-I	**0**	**0**	**2**	**2**	**4**
7	PHT242C113	Biomechanics lab-I	**0**	**0**	**2**	**2**	**4**
ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)							
8	CEN982A101	Communicative English-I	**1**	**0**	**0**	**1**	**1**
9	BHS982A104	Behavioural Science-I	**1**	**0**	**0**	**1**	**1**
		TOTAL				**20**	
BPT 2ND SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C201	Anatomy-II	**2**	**1**	**0**	**3**	**3**
2	PHT242C202	Physiology-II	**2**	**1**	**0**	**3**	**3**
3	PHT242C203	Biomechanics-II	**2**	**1**	**0**	**3**	**3**
4	PHT242C204	Psychology	**1**	**1**	**0**	**2**	**2**
5	PHT242C205	Sociology	**1**	**1**	**0**	**2**	**2**
6	PHT242C211	Anatomy lab-II	**0**	**0**	**2**	**2**	**4**
7	PHT242C212	Physiology lab-II	**0**	**0**	**2**	**2**	**4**
8	PHT242C213	Biomechanics lab-II	**0**	**0**	**2**	**2**	**4**
ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)							
9	CEN982A201	Communicative English-II	**1**	**0**	**0**	**1**	**1**
10	BHS982A204	Behavioural Science-II	**1**	**0**	**0**	**1**	**1**

		TOTAL				**21**	
BPT 3RD SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C301	Pathology-I	**1**	**1**	**0**	**2**	**2**
2	PHT242C302	Microbiology-I	**1**	**1**	**0**	**2**	**2**
3	PHT242C303	Exercise therapy-I	**2**	**1**	**0**	**3**	**3**
4	PHT242C304	Electrotherapy-I	**2**	**1**	**0**	**3**	**3**
5	PHT242C305	Community Medicine	**2**	**1**	**0**	**3**	**3**
6	PHT242C311	Exercise Therapy lab-I	**0**	**0**	**2**	**2**	**4**
7	PHT242C312	Electro Therapy lab-I	**0**	**0**	**2**	**2**	**4**
ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)							
8	EVS982A303	Environmental science	**1**	**0**	**0**	**1**	**1**
9	CEN982A301	Communicative English-III	**1**	**0**	**0**	**1**	**1**
ABILITY ENHANCEMENT ELECTIVE COURSES (AEEC)							
10		Courses offered by other department	**2**	**0**	**0**	**2**	**2**
GENERIC ELECTIVE							
11	PHT242G301	GE-2	**3**	**0**	**0**	**3**	**3**
		TOTAL				**24**	
BPT 4TH SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C401	Pathology-II	**1**	**1**	**0**	**2**	**2**
2	PHT242C402	Microbiology-II	**1**	**1**	**0**	**2**	**2**
3	PHT242C403	Exercise Therapy-II	**2**	**1**	**0**	**3**	**3**
4	PHT242C404	Electrotherapy-II	**2**	**1**	**0**	**3**	**3**
5	PHT242C405	Pharmacology-I	**2**	**1**	**0**	**3**	**3**
6	PHT242C411	Exercise Therapy lab-II	**0**	**0**	**2**	**2**	**4**
7	PHT242C412	Electro Therapy lab-II	**0**	**0**	**2**	**2**	**4**
ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)							
8	CEN982A401	COMMUNICATIVE ENGLISH-IV	1	0	0	1	1
ABILITY ENHANCEMENT ELECTIVE COURSES (AEEC)							
9		COURSES OFFERED BY OTHER DEPARTMENT	**2**	**0**	**0**	**2**	**2**
GENERIC ELECTIVE							

10	PHT242G401	GE-2	**3**	**0**	**0**	**3**	**3**
		TOTAL				**23**	
BPT 5TH SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C501	GENERAL SURGERY, OBSTETRICS & GYNAECOLOGY	**2**	**1**	**0**	**3**	**3**
2	PHT242C502	GENERAL MEDICINE	**2**	**1**	**0**	**3**	**3**
3	PHT242C503	PHARMACOLOGY II	**2**	**1**	**0**	**3**	**3**
4	PHT242C504	CLINICAL ORTHOPAEDICS	**2**	**1**	**0**	**3**	**3**
5	PHT242C511	CLINICAL EDUCATION-I	**0**	**0**	**12**	**6**	**12**
ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)							
6	CEN982A501	COMMUNICATIVE ENGLISH-V	1	0	0	1	1
ABILITY ENHANCEMENT ELECTIVE COURSES (AEEC) (ANY ONE)							
7		ANY OTHER COURSE OFFERED BY OTHER SCHOOLS OF RGU AND OPTED BY STUDENT	2	0	0	2	2
GENERIC ELECTIVE							
8	PHT242G501	GE-2	**3**	**0**	**0**	**3**	**3**
		TOTAL				**24**	
BPT 6TH SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C601	CLINICAL CARDIOLOGY AND PULMONARY DISORDERS	**2**	**1**	**0**	**3**	**3**
2	PHT242C602	NEUROLOGY AND NEUROSURGERY	**2**	**1**	**0**	**3**	**3**
3	PHT242C603	SPORTS AND SPORTS PHYSIOLOGY	**2**	**1**	**0**	**3**	**3**
4	PHT242C604	PEDIATRICS AND PSYCHIATRY	**1**	**1**	**0**	**2**	**2**
5	PHT242C611	CLINICAL EDUCATION-II	**0**	**0**	**12**	**6**	**12**
ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)							
6	CEN982A601	COMMUNICATIVE ENGLISH-VI	**1**	**0**	**0**	**1**	**1**
ABILITY ENHANCEMENT ELECTIVE COURSES (AEEC) (ANY ONE)							

7		ANY OTHER COURSE OFFERED BY OTHER SCHOOLS OF RGU AND OPTED BY STUDENT	**2**	**0**	**0**	**2**	**2**
GENERIC ELECTIVE							
8	PHT242G601	GE-2	**3**	**0**	**0**	**3**	**3**
		TOTAL				**23**	
BPT 7TH SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C701	COMMUNITY BASED REHABILITATION	**2**	**1**	**0**	**3**	**3**
2	PHT242C702	ETHICS IN PHYSIOTHERAPY& BASIC FIRST AID	**2**	**1**	**0**	**3**	**3**
3	PHT242C703	PHYSIOTHERAPY IN ORTHOPAEDICS CONDITION	**2**	**1**	**0**	**3**	**3**
4	PHT242C704	PHYSIOTHERAPY IN NEURO AND PSYCHOSOMATIC CONDITIONS	**2**	**1**	**0**	**3**	**3**
5	PHT242C711	COMMUNITY BASED REHABILITATION LAB	**0**	**0**	**2**	**2**	**4**
6	PHT242C712	PHYSIOTHERAPY IN ORTHOPAEDICS CONDITION LAB	**0**	**0**	**2**	**2**	**4**
7	PHT242C713	PHYSIOTHERAPY IN NEURO AND PSYCHOSOMATIC CONDITIONS LAB	**0**	**0**	**2**	**2**	**4**
8	PHT242C714	CLINICAL EDUCATION-III	**0**	**0**	**12**	**6**	**12**
DISCIPLINE SPECIFIC-DSE (ANY ONE)							
10	PHT242D701	YOGA & NATUROPATHY	3	1	0	4	4
12	PHT242D702	ORTHOTICS & PROSTHETICS	3	1	0	4	4
		TOTAL				**28**	
BPT 8TH SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C801	CLINICAL REASONING, EVIDENCE BASED PHYSIOTHERAPY, ADMINISTRATION AND TEACHING SKILLS	**1**	**1**	**0**	**2**	**2**
2	PHT242C802	PHYSIOTHERAPY IN SPORTS INJURIES	**2**	**1**	**0**	**3**	**3**
3	PHT242C804	PHYSIOTHERAPY IN CARDIO RESPIRATORY AND GENERAL SURGICAL CONDITIONS	**2**	**1**	**0**	**3**	**3**

4	PHT242C811	PHYSIOTHERAPY IN SPORTS INJURIES LAB	**0**	**0**	**2**	**2**	**4**
5	PHT242C812	PHYSIOTHERAPY IN CARDIO RESPIRATORY AND GENERAL SURGERY CONDITIONS LAB	**0**	**0**	**2**	**2**	**4**
6	PHT242C813	CLINICAL EDUCATION-IV	**0**	**0**	**12**	**6**	**12**
7	PHT242C821	RESEARCH PROJECT	**0**	**0**	**2**	**2**	**6**
DISCIPLINE SPECIFIC-DSE (ANY ONE)							
11	PHT242D801	OCCUPATIONAL THERAPY	3	1	0	4	4
12	PHT242D802	ALLIED THERAPEUTICS	3	1	0	4	4
		TOTAL				**24**	

COURSE STRUCTURE FOR BPT

SEMESTER	**CORE COURSE**	**credit**	**Ability Enhancement Compulsory Course (AECC) (9)**	**Credit**	**Ability Enhancement Elective Course (AEEC) (2) (Skill Based)**	**Credit**	**Elective: Discipline Specific DSE (4)**	**Credit**	**Elective: Generic (GE) (8)**	**Credit**	**No of papers each**	**TOTAL CREDIT**
I	Anatomy-I	5	Comm. English – I	1							4	20
	Physiology-I	5	Behavioural Science-I *	1								
	Biomechanics-I	5										
	Biochemistry	3										
II	Anatomy-II	7	Comm. English – II	1							5	2
	Physiology-II	7	Behavioural Science-II *	1								
	Biomechanics-II	7										
	Psychology	5										
	Sociology	5										
III	Pathology& Microbiology-I	6	Environmental Science	2					GE-1	3	8	38
			Comm.	1					GE-2	3		

	Exercise Therapy-1	7	English-III									
	Electrotherapy -I	7										
	Pharmacology -I	5										
IV	Pathology & Microbiology-II	6	Comm. English-IV	1					GE -1	3	7	38
	Exercise Therapy-1	7										
	Electrotherapy -II	7										
	Pharmacology -II	5							GE -2	3		
V	General Surgery	7	Comm. English -V	1	AEEC/ SEC/-1*	2			GE-1	3	8	41
	General Medicine	7										
	Obstetrics and Gynaecology	7										
	Clinical Orthopaedics	7							GE-2	3		
VI	Research Methodolgy& Biostatistics	7	Comm. English – VI	1	AEEC/ SEC/-2*	2			GE-1	3	8	46
	Neurology	7							GE-2	3		
	Sports	7										
	Cardiology	7										
VII	Community Based Rehabilitation	5	Comm. English – VII	1			DSE-1	6			7	58
	Ethics in Physiotherapy & Basic First Aid	5					DSE-2	6				
	Physiotherapy in Orthopaedics condition-I	7										
	Physiotherapy in Neuro Conditions	7										
VIII	Physiotherapy in	5	Comm.	1			DSE-3	6			7	68

	Orthopaedics condition-II		English – VIII									
	Physiotherapy in Sports Injuries	5					DSE-4	6				
	Physiotherapy in Mother and Child Care	5										
	Physiotherapy in Cardio respiratory Conditions	5										
	Project	8										
TOTAL	No. of papers 33	184	No. of papers 9	12	No. of papers - 2	4	No. of papers – 4	24	No. of papers 8	24	37	314

Total Credits: 185

I. Ability Enhancement Elective Course (AEEC) (Skill Based):

Sl No	**AEEC/SEC-1 (in fifth semester) (Choose any one)**	**AEEC/SEC-2(in sixth semester) (Choose any one)**
1	ILD-1	ILD-2
2	FRENCH-1	FRENCH-2
3	C++	LATEX
4	Any other course offered by other schools of RGU and opted by Student	Any other course offered by other schools of RGU and opted by Student

II. Elective: Discipline Specific DSE

Sl.No.	**DSE 1-2 (in seventh semester) (Choose any two)**	**DSE 3-4 (in eighth semester) (Choose any two)**
1	Allied Therapeutics	Occupational Therapy
2	Principal of Bioengineering	Yoga & Naturopathy

3	Orthotics &Prosthetics	Psychiatry
4	Remedial Biology	Community Medicine

III. A. (i)Generic Elective Papers (GE) (any two) from other Departments/ Disciplines: (Credit: 03 each) for 1st to 4th Semester

(a)Physics (b) Chemistry (c) Statistics (d) Research Methodology
(e) Any other subject Offered by other school as Basket course

Important Note: Students may add two courses of 3 credits in last two semesters from the Basket course if they wish to do so.

B. Generic Elective Papers (GE) (any four) offered for other Departments/ Disciplines: (Credit: 03-06 each)

1. Mechanics in body function
2. Basic Anatomy
3. First Aid
4. Yoga
5. Basics of Physical Therapy

Scheme of Evaluation

Theory Papers (T):

- **Continuous Evaluation: 15%** (Assignment, Class Test, Viva, Seminar, Quiz : Any Three)
- **Mid-term examination:** 10%
- **Attendance: 5%**
- **End Term Examination: 70%**

Practical Papers (P):

- **Continuous Evaluation: 25%** (Skill Test, lab copy, viva, lab involvement: Any Three)
- **Attendance: 5**%
- **End term examination:** 70 %

Combined Theory & Practical Papers (TP):

- **Continuous Evaluation: 15%**
  (Assignment. Class Test, Lab Experiment, Lab Copy, Viva: Any Three)
- **Mid-term examination:** 10%
- **Attendance: 5%**
- **End term examination:** 70 %

SYLLABUS (1ST Semester)		
PAPER I/SUBJECT NAME: ANATOMY-I		SUBJECT CODE: PHT242C101
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation

• The objectives of the course is to introduce students to gain knowledge regarding Anatomy of various structures, histological appearance of various organs of the human body.	• Lecture • Assignment • Individual / Group Presentation • Quiz • GroupDiscussions • CaseStudy	• On completion of this course students will be expected to gain knowledge regarding various structures, histological appearance of various organs of the human body.	• Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) • Mid- Term Examination: 10% • Attendance:5% • End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**General Anatomy:** Introduction to Anatomy, terms and terminology. Regions of Body, Cavities and systems. Surface anatomy – musculo-skeletal, vascular, cardiopulmonary system General Embryology. Applied anatomy.	5 Hours
2	**Musculoskeletal system:** Connective tissue & its modification, tendons, membranes, special connective tissue. Bone structure, blood supply, growth, ossification, and classification. Muscle classification, structure and functional aspect. Joints – classification, structures of joints, movements, range, limiting factors, stability, blood supply, nerve supply, dislocations and applied anatomy. Introduction to Upper Limb, Bones,Joints of Upper limb, Axilla, Pectoral region,The back, Scapular region, Arm, forearm and Hand, Nerve supply, blood supply and lymphatic drainage of upper limb.	20 hours
3	**Nervous system:** Classification of nervous system	20 hours

	Nerve – structure, classification, microscopy with examples. Neurons, classification with examples. Simple reflex arc. Parts of a typical spinal nerve/Dermatome Central nervous system – disposition, parts and functions Cerebrum Cerebellum Midbrain & brain stem Blood supply & anatomy of brain Spinal cord- anatomy, blood supply, nerve pathways Pyramidal, extra pyramidal system Thalamus, hypothalamus Structure and features of meninges Ventricles of brain, CSF circulation Development of nervous system & defects Cranial nerves – (course, distribution, functions and palsy) Sympathetic nervous system, its parts and components Parasympathetic nervous system Applied anatomy	
4	**Sensory system:** Structure and function of: o Visual system o Auditory system o Gustatory system o Olfactory system o Somato sensory system	3 hours

Text Book

1. Alison,G.Anne,W.(2014). Ross and Wilson Anatomy and Physiology in Health and Illness. Elsevier Health; UK, 13th edition
2. Khurana, I., Khurana, A., (2018).Textbook of anatomy and physiology, 3rd edition.

Reference Book:

1. Tortora,GJ. &DerriksonB.(2008).Principles of Anatomy and Physiology. Wiley, Global edition.
2. Venkatesh D. Sudhakar H.H. (2016). Basics of anatomy, physiology &microbiologylevel 1: CBS Publishers & Distributors, 4th edition.

SYLLABUS (1ST Semester)		
PAPER II /SUBJECT NAME: PHYSIOLOGY-I		SUBJECT CODE: PHT242C102
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C: 2-1-0-3

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objectives of the course is to introduce students acquire knowledge of the normal physiology of various human body systems and understand the alterations in physiology in diseases	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal physiology of various human body systems and understand the alterations in physiology in diseases and practice of physiotherapy.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**General Physiology** Cell: morphology, Structure and function of cell organelles Structure of cell membrane Transport across cell membrane Intercellular communication Homeostasis	5 hours
2	**Blood** Introduction-composition & function of blood W.B.C., R.B.C., Platelets formation & functions, Immunity Plasma: composition, formation & functions, Plasma Proteins:-types &functions	10 hours

	□Blood Groups- types , significance, determination □Hemoglobin □Haemostasis □Lymph-composition, formation, circulation &functions **Cardiovascular system** □Conducting system-components, impulse conduction □Heart valves □Cardiac cycle- definition, phases of cardiac cycle □Cardiac output- definition, normal value, determinants. Stroke volume and its regulation □Heart rate and its regulation □Arterial pulse, Blood pressure-definition, normal values, factors affecting blood pressure □Shock-definition, classification, causes and features □Basic idea of ECG □Cardiovascular changes during exercise	

3	**Nerve Muscle Physiology** Muscles- classification, structure, properties, Excitation contraction coupling Motor unit, EMG, factors affecting muscle tension, Muscle tone, fatigue, exercise Nerve –structure and function of neurons, classification, properties Resting membrane potential & Action potential their ionic basis All or None phenomenon Neuromuscular transmission Ionic basis of nerve conduction Concept of nerve injury &Wallerian degeneration Synapses Electrical events in postsynaptic neurons Inhibition & facilitation at synapses Chemical transmission of synaptic activity Principal neurotransmitters.	15 hours
4	**Nervous system** Introduction, central and peripheral nervous system, functions of nervous system Reflexes- monosynaptic, polysynaptic, superficial, deep & withdrawal reflex Sense organ, receptors, electrical & chemical events in receptors Sensory pathways for touch, temperature, pain, proprioception & others Control of tone & posture: Integration at spinal, brain stem, cerebellar, basal ganglion levels, along with their functions Motor mechanism: motor cortex, motor pathway:the descending tractspyramidal& extra pyramidal tracts-	18 hours

	origin, course, termination &functions.Upper motor neuron and lower motor neuron paralysis. Spinal cord lesions- complete transection &hemisection of the spinal cord Autonomic nervous system :features and actions of parasympathetic & sympathetic nervous system Hypothalamus Higher functions of nervous system Special senses- eye, ear, nose, mouth	

Text Books:

1. Arthur, Guyton,Textbook of Medical Physiology, Mosby. 3rd Edition.
2. Sembulingam.K,Human Physiology- Vol. 1&2 ,MedicalAllied, 7th Edition.

Reference Books:

1.Chaudhari, S.K ,Concise Medical Physiology, New CentralAgency,Calcutta, 4th Edition

2.Tortora&Grabowski,Harper Collins, Principals of Anatomy and Physiology, Gobal Edition

SYLLABUS (1ST Semester)		
PAPER III/SUBJECT NAME: BIOMECHANICS-I		SUBJECT CODE: PHT242C103
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
• The objectives of the course is to introduce students to acquire knowledge of the Biomechanics and able to practice application in human body parts.	• Lecture • Assignment • Individual / Group Presentation • Quiz • GroupDiscussions • CaseStudy	• On completion of this course students will be expected to acquire knowledge of the Biomechanics and able to practice its application in human body parts	• Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) • Mid- Term Examination: 10% • Attendance:5% • End Term Examination : 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Mechanics** - Definition of mechanics and Biomechanics **Motion:** definition, types of motion, plane and axis of motion, factor determining the kind and modification of motion. **Force** - Definition, diagrammatic representation of force, point of application, classification of forces, concurrent, coplanar and co-linear forces, composition and resolution of forces, angle of pulls of muscle. **Friction** **Gravity** - Definition, line of gravity, Centre of gravity	10 hours

2	**Equilibrium** - Supporting base, types, and equilibrium in static and dynamic state. **Levers** - Definition, function, classification and application of levers in physiotherapy & order of levers with example of lever in human body **Pulleys** - system of pulleys, types and application **Elasticity** - Definition, stress, strain, HOOKE'S Law **Springs** - properties of springs, springs in series and parallel, elastic materials in use.	8 hours
3	**Muscular system**: Definition, properties of muscle, muscular contraction, structural classification, action of muscle in moving bone, direction of pull, angle of pull, functional classification, coordination of muscular system.	10 hours
4	**Joint structures and functions:** i. Joint design, Structure of Connective Tissue, Properties of Connective Tissue, joint function, changes with disease, injury, immobilization, exercise, over use ii. Structure and functions of upper extremity joints – shoulder complex, elbow complex, wrist and hand complex	20 hours

Text Book:

1. Norkins&Levengie,Joint Structure and Function- A Comprehensive Analysis –F.ADavis, 5th Edition
2. Norkins& White, Measurement of Joint Motion–Aguideto Goniometry, F. A Davis, 5th Edition

Reference Books:

1.Low & Reed, Basic Biomechanics explained –Butterworth Heinmann, 5th Edition.

2. SoderbergLippineou,Kinesiology Applied to Pathological Motion, 6th Edition.

SYLLABUS (1ST Semester)		
PAPER IV /SUBJECT NAME: BIOCHEMISTRY		SUBJECT CODE: PHT242C104
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Prerequisites:

· The student must have pursued Biology and Chemistry and have a basic idea about molecules.

Course Objective:

· To make students learn about the biochemical function and metabolism.

· To make the students learn about the various reactions that takes place between molecules.

Detailed Syllabus:

Modules Topics (if applicable) & Course Contents Periods

I.

Introduction to Biochemistry: A historical prospective. Amino acids & Proteins: Structure & Function. Structure and properties of Amino acids, Types of proteins and their classification, Forces stabilizing protein structure and shape. Different Level of structural organization of proteins, Protein Purification. Denaturation and renaturation of proteins. Fibrous and globular proteins. Carbohydrates: Structure, Function and properties of Monosaccharides, Disaccharides and Polysaccharides. Homo & Hetero Polysaccharides, Mucopolysaccharides, Bacterial cell wall polysaccharides, Glycoprotein's and their biological functions 16

II.

Lipids: Structure and functions –Classification, nomenclature and properties of fatty acids, essential fatty acids. Phospholipids, sphingolipids, glycolipids, cerebrosides, gangliosides, Prostaglandins, Cholesterol. Nucleic acids: Structure and functions: Physical & chemical properties of Nucleic acids, Nucleosides & Nucleotides, purines &pyrimidines,. Biologically important nucleotides, Double helical model of DNA structure and forces responsible for A, B & Z – DNA, denaturation andrenaturation of DNA. 16

III.

Enzymes: Nomenclature and classification of Enzymes, Holoenzyme, apoenzyme, Cofactors, coenzyme, prosthetic groups, metalloenzymes, monomeric &oligomeric enzymes, activation energy and transition state, enzyme activity, specific activity, common features of active sites, enzyme specificity: types & theories, Biocatalysts from extreme thermophilic and hyperthermophilicarchaea and bacteria. Role of: NAD+, NADP+, FMN/FAD, coenzymes A, Thiamine pyrophosphate, Pyridoxalphosphate,lipoic-acid, Biotin vitamin B12, 16

Tetrahydrofolate and metallic ions

IV Carbohydrates Metabolism: Reactions, energetics and regulation. Glycolysis: Fate of pyruvate under aerobic and anaerobic conditions. Pentose phosphate pathway and its significance, Gluconeogenesis, Glycogenolysis and glycogen synthesis. TCA cycle, Electron Transport Chain, Oxidative phosphorylation. ß-oxidation of fatty acids. 16

TOTAL 48

Text Book:

1. Chatterjee M.N, Textbook of Biochemistry –JaypeeBrothers, 8th edition.
2. Vasudevan D.M, Textbook of Biochemistry for medical students -Jaypee Brothers, 8th edition.

Reference Book:

1Marshall &Bangert,Clinical Biochemistry – Metabolic & Clinical aspects – Churchill Livingstone, 3rd edition.

2. Southland V.A, Biochemistry – ChurchillLivingstone, 5th edition.

SYLLABUS (1ST Semester)		
PAPER V/SUBJECT NAME: ANATOMY LAB-I		SUBJECT CODE: PHT242C111
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objective of the course is to introduce students to gain practical knowledge regarding anatomy of various structures and the histological appearance of various organs of the human body.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal anatomy of the human body, which will help them to diagnose and treat diseases in the near future.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	Identification and description of all anatomical structures.	8 hours
2	The learning of Anatomy is by demonstration only through dissected parts, slides, models, charts, etc	10
3	Demonstration of dissected parts (upper extremity, lower extremity, thoracic & abdominal viscera, face and brain).	10
4	Demonstration of skeleton- articulated and disarticulated.	10

Text Book:

1. Alison,G.Anne,W.(2014). Ross and Wilson Anatomy and Physiology in Health and Illness. Elsevier Health; UK,13th edition.
2. Khurana, I., Khurana, A., (2018).Textbook of anatomy and physiology, 3rd edition

Reference Books:

1. Low & Reed, Basic Biomechanics explained –Butterworth Heinmann, 5th Edition

SYLLABUS (1ST Semester)		
PAPER VI/SUBJECT NAME: PHYSIOLOGY LAB-I		SUBJECT CODE: PHT242C112
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

DETAILED SYLLABUS:

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● .The objective of the course is to introduce students to gain practical knowledge regarding the alterations in physiology of human body.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal physiology of the human body, which will help them to diagnose and treat diseases in the near future..	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	Examination of pulse	10 hours
2	Examination of Blood pressure	10 hours
3	Examination of Respiratory rate.	10 hours
4	Examination of Reflexes	10 hours

Text Book:

1. Alison,G.Anne,W.(2014). Ross and Wilson Anatomy and Physiology in Health and Illness. Elsevier Health; UK,13th edition.
2. Sembulingam.K,Human Physiology- Vol. 1&2 ,MedicalAllied, 7th Edition.

Reference Books:

1. Arthur, Guyton,Textbook of Medical Physiology, Mosby. 4th Edition.
2. Tortora&Grabowski,Harper Collins, Principals of Anatomy and Physiology, Gobal Edition

SYLLABUS (1ST Semester)		
PAPER VII/NAME: BIOMECHANICS LAB-I		SUBJECT CODE: PHT242C113
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● .The objectives of the course is to introduce students to gain practical knowledge of the Biomechanics of the human body parts, locomotion and body postures.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal biomechanics of the human body, which will help them to diagnose and treat diseases in the near future.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
	1. Surface land mark-bony, muscular and ligamentous. 2. Identify Muscle work of various movements in body at different angle. 3. Identify normal and abnormal posture.	40 hours

Text Book:

1. Norkins&Levengie,Joint Structure and Function- A Comprehensive Analysis –F.ADavis, 5th Edition

Reference Books:

1. Low & Reed, Basic Biomechanics explained –Butterworth Heinmann, 5th Edition

SYLLABUS (2nd Semester)		
PAPER I/SUBJECT NAME: ANATOMY-II		SUBJECT CODE: PHT242C201
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
● The objectives of the course is to introduce students to gain knowledge regarding Anatomy of various structures, histological appearance of various organs of the human body.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● .On completion of this course students will be expected to gain knowledge regarding various structures, histological appearance of various organs of the human body.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination : 10% ● Attendance:5% ● End Term Examinatio n: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Cardiovascular system:** Circulatory system – major arteries and veins of the body, structure of blood vessels Heart structure, positions, chambers, valves, internal & external features Blood supply to heart Conductive system of heart **Lymphatic system** Circulation, structure & functions Lymph nodes	10 hours
2	**Respiratory system:** Structure of upper and lower respiratory tract Thorax: Pleural cavities & pleura Lungs and respiratory tree Heart and great vessels Diaphragm	10 hours
3	**Digestive system** Parts of digestive system Abdominal cavity – divisions Muscles of abdominal wall Liver Pancreas Spleen Alimentary canal Gall bladder Intestine (small & large) **Musculoskeletal system:** Introduction to lower limb, Bones and Joints of Lower limb, Front, Medial side and back of thigh, Popliteal fossa,gluteal region,	18 hours

	Front of Leg, back of leg Medial and lateral sides of leg,, Dorsum of foot, Arches of foot, Nerve supply, blood supply and lymphatic drainage of lower limb.	
4	**Urinary and Reproductive system:** Urinary system Pelvic floor, innervations Kidney, Ureter, bladder, urethra Genital system – male and female o Reproductive system of male o Reproductive system of female **Endocrine system:** Pituitary gland Thyroid Parathyroid	10 hours

TextBook

1. Alison,G.Anne,W.(2014). Ross and Wilson Anatomy and Physiology in Health and Illness. Elsevier Health; UK, 13th Edition.
2. Joshi. (2018).Physiology practical manual 2/E, for B.Sc occupational and physical therapy, B.Sc Nursing &allied sciences, 3rd Edition.

Reference Book:

1.Singh, S.H.(2017). Principles of human physiology for courses in nursing and allied health sciences: CBS Publishers & Distributors, 3rd Edition.

2.Tortora,GJ. &DerriksonB.(2008).Principles of Anatomy and Physiology. WileyPublishers& Distributors, global Edition.

SYLLABUS (2nd Semester)		
PAPER II /SUBJECT NAME: PHYSIOLOGY-II		SUBJECT CODE: PHT242C202
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
● The objectives of the course is to introduce students acquire knowledge of the normal physiology of various human body systems and understand the alterations in physiology in diseases.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal physiology of various human body systems and understand the alterations in physiology in diseases.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination : 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Digestive System** Digestion & absorption of nutrients Gastrointestinal secretions & their regulation Functions of Liver & Stomach. **Respiratory System**:	10 hours
2	**Endocrinology** Physiology of the endocrine glands – Pituitary, Pineal Body, Thyroid, Parathyroid, Adrenal, Gonads, Thymus, Pancreas. Hormones secreted by these glands, their classifications and functions.	18 hours
3	**Male & female reproductive system** Male - Functions of testes, pubertal changes in males, testosterone - action & regulations of secretion. Female - Functions of ovaries and uterus, pubertal changes, menstrual cycle, estrogens and progestron - action and regulation.	10 hours
4	**Renal System** Physiology of kidney and urine formation Glomerular filtration rate, clearance, Tubular function Water excretion, concentration of urine-regulation of Na+, Cl-, K+ excretion Physiology of urinary bladder	10 hours

Text Books:

1. Arthur, Guyton, Textbook of Medical Physiology, Mosby.2nd Edition
2. Sembulingam.K, Human Physiology- Vol. 1&2 ,MedicalAllied, 7th Edition

Reference Books:

1.Chaudhari, S.K ,Concise Medical Physiology, New CentralAgency,Calcutta, 1st Edition

2.Tortora&Grabowski,Harper Collins, Principals of Anatomy and Physiology, Global Edition.

SYLLABUS (2nd Semester)		
PAPER III/SUBJECT NAME: BIOMECHANICS-II		SUBJECT CODE: PHT242C203
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objectives of the course is to introduce students to acquire knowledge of the Biomechanics and able to practice application in human body parts.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the Biomechanics and able to practice application in human body parts.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Joint structures and functions:** **i.**Joint design, Structure of Connective Tissue, Properties of Connective Tissue, joint function, changes with disease, injury, immobilization, exercise, over use ii. Structure and functions of lower extremity joints – hip joint, knee joint, ankle and foot complex	20 hours
2	**Joint structures and functions:** i. Structure and functions of axial skeletal joints – vertebral column –craniocervical, thorax, lumbar, lumbo pelvic region. ii. Structure and functions of tempromandibular joint.	10 hours
3	**Posture** – dynamic and static posture, kinetic and kinematics of posture, analysis of posture, effect of age, pregnancy, occupation on posture.	10 hours
4	**Gait** – kinematics and kinetics of gait, gait in running and stair climbing.	8 hours

Text Book:

1. Norkins&Levengie, Joint Structure and Function- A Comprehensive Analysis –F.ADavis, 5th Edition
2. Norkins& White, Measurement of Joint Motion–A guide to Goniometry, F. A Davis, 5th Edition

Reference Books:

1.Low & Reed, Basic Biomechanics explained –Butterworth Heinmann, 2nd Edition

2. Soderberg Lippineou, Kinesiology Applied to Pathological Motion, 4thEdition.

SYLLABUS (2nd Semester)		
PAPER IV /SUBJECT NAME: PSYCHOLOGY		SUBJECT CODE: PHT242C204
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:1-1-0-2

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
● The objective of the course is to introduce students to the knowledge of the Psychology and its use in treating patients.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the Psychology and able to practice its application in the society.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination : 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	Introduction to Psychology, Fields of application of Psychology, influence of heredity and environment on the individual. Learning – theories and principles of learning, Learning disabilities. Memory – types, theories of memory and forgetting, methods to improve memory	10 hours
2	Thinking – process of thinking, problem solving, decision making and creative thinking. Motivation - theories and types of Motivation. Emotions - theories of emotions and stress, Emotional and behavioral disorders of childhood and adolescence, Disorders of under and over controlled behavior, Eating disorders. Attitudes – theories, attitudes and behavior, factors in attitude change.	20 hours
3	Intelligence - theories of intelligence, I.Q., general intelligence and special intelligence, intelligence tests and their uses. Personality, theories of personality, factors influencing personality, Personality Disorders. Conflict and frustration - Common defensive mechanism : Identification, regression, repression, projection, sublimation and rationalization.	10 hours
4	Attention and Perception : Nature of attention, factors determining attention, nature of perception, principle of perceptual grouping; Illusions and Hallucination. Counseling - Aims and principles.	8 hours

	Development and growth of behavior in infancy and childhood, adolescence, adulthood and old age, normal and abnormal. Psychotherapy – introduction to paradigms in psychopathology and therapy. Mental deficiency - a) Mental retardation, b) Autistic behavior c) Learning disabilities.	

Text Book:

1. Weld A.V, Foundation of Psychology, CBS Publishing House, 4th edition.
2. Kolkar A, Introduction to social Psychology, Oxford Publishing House, 5th Edition.

Reference Books:

1.Mehta Manju,Behaviorial Sciences for Medical Undergraduates-Jaypee Brothers, 9th Edition.

2.Mohsin S.M., Elementary Psychology- Jaypee Brothers, 2nd Edition.

SYLLABUS (2nd Semester)		
PAPER V/SUBJECT NAME: SOCIOLOGY		SUBJECT CODE: PHT242C205
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:1-1-0-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objectives of the course is to introduce students to acquire knowledge of the Sociology and able to work in society	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the Sociology and able to practice application in the society.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10%

			● Attendance:5% ● End Term Examination : 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	Introduction: Definitions of sociology, sociology as a science ofsociety, uses of the study of sociology, application of knowledge of sociology in physiotherapy and occupational therapy. Sociology & Health: Social factors affecting health status, socialconsciousness and perception of illness, social consciousness andmeaning of illness, decision making in taking treatment. Institutions of health, their role in the improvement of the health of the people. Socialization: Meaning of Socialization, influence of social factor onpersonality, Socialization in hospitals, Socialization in therehabilitation of patients	10 hours
2	Social groups: Concept of social groups, influence of formal andinformal groups on health and sickness, the role of primary groups andsecondary groups in hospitals and rehabilitation setting. Family: Influence of family on human personality, discussion ofchanges in functions of a family, influence of family on individual'shealth, family and nutrition, the effects of sickness on family andpsychosomatic disease.	10 hours

	Community: Concept of community, role of rural and urbancommunities in public health, role of community in determining belief's , practice and home remedies in treatment.	
3	Culture: Components of culture. Impact of culture on human behaviour,cultural meaning of sickness, response & choice of treatment (role ofculture as social consciousness in moulding the perception of reality),and culture induced symptoms and disease, sub- culture of medicalworkers. Cast system: Features of modern caste system and its trends. Social change: Meaning of social change, factors of social change,human adaption and social change, social change and stress, socialchange and deviation, social change and health programmes, the role ofsocial planning in improvement of health and in rehabilitation	20 hours
4	Social problems of the disabled : Populasion explosion Poverty and beggary Un employment Juvenile delinquency Prostitution Alcoholism Problems of women in employment Geriatric problems Problems of underpreviledged Social security: Social security and social legislation in relation to disabled Social worker: The role of medical social worker.	8 hours

Text Book:

1. MageeD.J, Sociology- Drydon Press, Illinois, 4th Edition.
2. Kupaswamy, Social changes in India- Vikas Publications, Delhi, 3rd Edition.

Reference Books:

1.Parter& Alder – Psychology & Sociology applied to medicine – W.B Saunders, 4th Edition.

2.Julian – Social Problems- PrenticeHall, 1st Edition.

SYLLABUS (2nd Semester)		
PAPER V/SUBJECT NAME:ANATOMY LAB-II		SUBJECT CODE: PHT242C211
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objective of the course is to introduce students to gain practical knowledge regarding anatomy of various structures, histological appearance of various organs of the human body.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal anatomy of the human body, which will help them to diagnose and treat diseases in the near future.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination:

			10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Demonstration of dissected parts (upper extremity, lower extremity, thoracic & abdominal viscera, face and brain).	10 hours
2	2. Demonstration of skeleton- articulated and disarticulated.	10 hours
3	During the training more emphasis will be given on the study of bones, muscles, joints, nerve supply of the limbs and arteries of limbs.	10 hours
4	Surface anatomy: -surface land mark-bony, muscular and ligamentous. -surface anatomy of major nerves, arteries of the limbs. -Points of palpation of nerves and arteries.	18 hours

Text Book:

1. Alison,G.Anne,W.(2014). Ross and Wilson Anatomy and Physiology in Health and Illness. Elsevier Health; UK, 4th edition

Reference Books:

1. Low & Reed, Basic Biomechanics explained –Butterworth Heinmann, 4th Edition.

SYLLABUS (2nd Semester)		
PAPER VI/SUBJECT NAME:PHYSIOLOGY LAB-II		SUBJECT CODE: PHT242C212
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objective of the course is to introduce students to gain practical knowledge regarding the alterations in physiology of human body.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal physiology of the human body, which will help them to diagnose and treat diseases in the near future.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Spirometery to measure various lung capacities & volumes, Respiratory rate, Tidal volume, IRV, IC, ERV, EC, residual volume on Spirometery.	10 hours
2	Estimate of Haemoglobin, R.B.C., W.B.C., TLC, DLC, ESR count.	10 hours

3	Blood indices, Blood grouping, Bleeding& Clotting time.	10 hours
4		

Text Book:

1. Alison,G.Anne,W.(2014). Ross and Wilson Anatomy and Physiology in Health and Illness. Elsevier Health; UK, 4th edition
2. Arthur, Guyton, Textbook of Medical Physiology, Mosby.2ndEdition.

Reference Books:

1. Sembulingam.K, Human Physiology- Vol. 1&2 ,MedicalAllied, 7th Edition

SYLLABUS (2nd Semester)		
PAPER VII/NAME:BIOMECHANICS LAB-II		SUBJECT CODE: PHT242C213
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objectives of the course is to introduce students to gain practical knowledge of the Biomechanics of the human body parts, locomotion and body postures.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to acquire knowledge of the normal biomechanics of the human body, which will help them to diagnose and treat diseases in the near future.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination: 10% ● Attendanc

			e:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	Goniometry – measurement of joint ROM	18 hours
2	Identify Muscle work of various movements in body at different angle.	10 hours
3	Identify normal and abnormal posture.	10 hours
4	Normal gait with it parameters and identify abnormal gait with the problems in it.	10 hours

Text Book:

1. Norkins&Levengie,Joint Structure and Function- A Comprehensive Analysis –F.ADavis, 5th Edition

Reference Books:

1. Low & Reed, Basic Biomechanics explained –Butterworth Heinmann, 4th Edition.

SYLLABUS (3rd Semester)		
PAPER I/NAME: PATHOLOGY-I		SUBJECT CODE: PHT242C301
SCHEME OF EVALUATION: (T)	CREDIT UNIT-2	L-T-P-C:1-1-0-2

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
The objectives of the course is to introduce students to acquire knowledge of the Pathology and learn to apply these knowledge into practice.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	On completion of this course students will be expected to acquire knowledge of the Pathology and practice its application on practical field.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Introduction: Concepts of diseases, classification of lesions 2. Bacterial, viral and parasitic infections – a general outline.	10 hours
2	3. Inflammation and repair, degeneration, necrosis and gangrene 4. Haemorrhage, shock, embolism, thrombosis	10 hours
3	5. Tuberculosis, Leprosy, Typhoid 6. Deficiency diseases	10 hours
4	7. Tumors: etiology& spread, common tumours 8. Blood: Anaemia, Heart and blood vessels 9. Respiratory System : Pneumonias, Bronchiectasis, Emphysema, chronic, Bronchitis, Asthma.	18Hours

Text Books :

1) General Pathology – Walter & Israel – Churchill Livingstone

2) Muirs Textbook of Pathology –Anderson – Edward Arnold Ltd.

Reference Books:

1) Pathology: Implications for Physical Therapists – Goodmann and Boissonnault – W.B Saunders

2) Textbook of Pathology - Harsh Mohan –Jaypee Brothers .

SYLLABUS (3rd Semester)		
PAPER II/NAME: MICROBIOLOGY-I		SUBJECT CODE: PHT242C302
SCHEME OF EVALUATION: (T)	CREDIT UNIT-2	L-T-P-C:1-1-0-2

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
The objectives of the course is to introduce students to acquire knowledge of Microbiology and learn to apply these knowledge into practice.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	On completion of this course students will be expected to acquire the knowledge of the Microbiology and learn to practice its application in practical field.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Introduction and history of microbiology 2. Micro-organisms a) Classification b) Shape and arrangement c) Special characteristics –spores, capsules, enzymes, motility, reproduction	18 hours
2	3. Disinfection and antiseptics 4. Sterilization and asepsis	10 hours
3	5. Antibacterial agents – fundamental aspect, susceptibility tests.	10 hours
4	6. Infection – source of infection, portals of entry, spread of infection	10 Hours

Text Books:

1) Essential of Medical Microbiology – Bhatia &Lal – Jaypee Brothers.

2) Medical Microbiology –Mims –Jaypee Brothers

Reference Books:

1) Microbiology :An introduction for the Health Sciences – Ackerman and Richards – W.B. Saunders Co.

SYLLABUS (3rd Semester)		
PAPER III/NAME: EXERCISE THERAPY-I		SUBJECT CODE: PHT242C303
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
.The objective of this course is to gain knowledge and skills of exercisetherapy. Following completion of this course of exercise therapy the students will be well verged in exercise therapy techniques	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	Following completion of this courses the students will understand the basic aspects of exercise therapy and will learn the utility of each exercises.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Section – I** 1. Introduction to Exercise therapy , Principles, techniques and general areas of its application, Assessment & its importance. 2. Description of Fundamental starting positions and derives position including joint positions, muscle work, stability, effects and uses. 3. Introduction to Movements including analysis of joint motion, muscle work and Neuro muscular co-ordination.	18 hours

	4. Classification of movements – Describe the types, technique of application, indications, contraindication, effects and uses of the following: a) Active movement b) Passive movement c) Active assisted movement d) Resisted movement e) To study the principles, techniques of application indication, Contraindication, precaution, effects and uses of Suspension Therapy.	
2	**Section II** a) Principles and application techniques of Manual muscle testing. b) Testing position,procedure and grading of muscles of the upper limb, lower limb and trunk etc **Section III** Goniometery a) Principles, techniques and application of Goniometery. b) Testing position, procedure and measurement of R.O.M of the joints of upper limbs, lower limbs and trunk.	10 hours
3	**Section IV** Motor Learning i)Introduction to motor learning a) Classification of motor skills b) Measurement of motor performance. ii)Introduction to motor control a) Theories of motor control b) Applications iii)Learning Environment a) Learning of Skill b) Instruction & augmented feed back	10 hours
4	**Section V** Soft Tissue Manipulation (Therapeutic Massage) a) History, various types of soft tissue manipulation techniques. b) Physiological effects of soft tissue manipulation on the following systems of the body, Circulatory , Nervous, Musculoskeletal, Excretory, Respiratory, Integumentary system and Metabolism. c) Classify define and describe – effleurage, stroking, kneading, deep friction,vibration and shaking etc. S**ection VI** Relaxation & Therapeutic Gymnasium Relaxation i. Describe relaxation, muscle fatique, muscle spasm and tension(mental & physical) ii. Factors contributing to fatique& tension iii. Techniques of relaxation(Local and General) iv. Effects, uses and clinical application	10Hours

	v. Indication & contraindication Therapeutic Gymnasium i. Setup of a gymnasium & its importance ii. Various equipment in the gymnasium. iii. Operational skills, effects & uses of each equipment	

Text Books:

1. Therapeutic Exercises Foundation and Techniques – Kisner and Colby-F.A Davis.
2. Principle of Exercise Therapy- Gardiner – C.B.S Delhi.

Reference Books:

1. Practical Exercise Therapy Hollis- Blacwell Scientific Publications.
2. Therapeutic Exercise – Basmajian- Williams and Wilkins.

SYLLABUS (3rd Semester)		
PAPER IV/NAME: ELECTROTHERAPY-I		SUBJECT CODE: PHT242C304
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
In this course the student will learn the Principles, Techniques, Effects, Indication, Contra-Indication and the dosage parameter for various indications of electro therapeutic	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● Group Discussions ● CaseStudy	On completion of this course and curriculum the student will be able to list the indications, contra indications, dosages of electro therapy modalities, demonstrates the different techniques, and describe their effects on various conditions.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

modalities in the restoration of physical function. .			

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Physical Principles** 1. Structure and properties of matter – solids, liquids and gases, adhesion, surface tension, viscosity, density and elasticity. 2. Structure of atom, molecules, elements and compounds. Election theory, static and current electricity 3. Conductors, Insulators, Potential Difference, Resistance &Intensity Ohm's Law – Its application to AC &DC currents a) Rectifying Devices–Thermionic valves, Semiconductors, b) Transistors, Amplifiers, Transducers Oscillator circuits c) Capacitance, condensers in DC and AC circuit d) Display devices & indicators – analogue & digital **Effects of Current Electricity:** 1. Chemical effects- Ions and electrolytes, Ionisation, Production of a E.M.F by chemical action. 2. Magnetic effects, Molecular theory of magnetism, Magnetic fields, Electromagnetic Induction. 3. Milli ammeter and Voltmeter, Transformers and choke coil Thermal Effects – Joule's Law and Heat production 4. Physical Principals of sound and its properties 5. Physical Principals of light and its properties 6. Electromagnetic spectrum – biophysical application **Electrical supply:-** a) Brief outline of main supply of electric current b) Dangers –short circuits, electric shocks c) Precautions – safety devices, earthing, fuses etc. d) First aid & initial management of electric shock	18 hours
2	**Low Frequency Currents** 1. Introduction to direct, alternating &modified currents 2. Production of direct current –Physiological and therapeutic effects of constant current anodal and cathodal Galvanism, Ionisation and their application in various conditions.	10 hours

	3. Iontophoresis – Principles of clinical application, indication, contraindication, precaution, operational skills of equipment & patient preparation. 4. Modified direct current – various pulses, duration and frequency and their effect on Nerve and Muscle tissue. Production of interrupted and surged current and their effects. 5. Modified direct current- Physiological and therapeutic effects, principles of clinical application, indications, contra indications, precautions, operational skills of equipment& patient preparation. 6. Transautaneous Electrical Nerve Stimulations(TENS):- a. Types of Low Frequency pulse widths, frequency & intensities used as TENS applications. b. Theories of pain relief by TENS c. Principle of clinical application, effects & users, indicators, contraindications, precautions, operational skills of equipment and patient preparation.	
3	**Electrical Reaactions and Electro-diagnostic tests:** 1. Electrical Stimuli and normal behavior of Nerve and muscle tissue. Types of lesion and development of reaction of degeneration Faradic- Intermittent direct current test, Faradic foot bath 2. S.D Curve and its application Chronaxie, Rheobase&pulse ratio a. Infra red rays- Wavelenght, frequency, types & sources of IRR generation, techniques of irradiation, physiological & therapeutic effects, indications, contraindications, precautions, operational skills of equipment 7patient preparation. b. Ultra- violet rays(UVR):- 3. Wavelenght, frequency, types & sources of UVR generation , techniques of irradiation , physiological & therapeutic effects, indications.contraindications, precautions, operational skills of equipment & patient preparation. 4. Dosimetry of UVR.	10 hours
4	**Superficial heat – Paraffin wax bath,moist heat, electrical heating pads** a. Mechanism of production. b. Mode of heat transfer. c. Physiological & therapeutic effects. d. Indications, contraindications, precautions, operational skills of equipment & patient preparation.	10Hours

Text Books:

1. Electrotherapy Explained: Principles &Practice – Low & Reed – Butterworth Heinemann.

2. Clayton's Electrotherapy,(9*t*h edi.) Forster &Palastanga BaillereTindall.

Reference Books:

1. Therapeutic Heat and cold – Lehman- Williams & Wilkins.

2. Principles and Practice of Electrotherapy- Kahn – Churchill Livingstone.

SYLLABUS (3rd Semester)		
PAPER V/NAME:COMMUNITY MEDICINE	SUBJECT CODE: PHT242C305	
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C:2-1-0-3

Course Objective	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
To introduce students to acquire knowledge of the community medicine and enable them to practice application in human body .At the end of the course, the candidate shall be able to understand the contents given in the syllabus of Community Medicine	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to gain knowledge regarding different diseases and disorders seen in the community .the students are also expected to learn about population control strategies, nutrition and health.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Health & Disease** □ Definitions: National & International, Concepts, Dimensions and Indicators of Health, Concept of well-being, Spectrum and Determinants of Health □ Concept and natural history of Disease, Concepts of disease control and prevention, Modes of Intervention □ Population Medicine □ The role of socio-economic and cultural environment in health and disease **Epidemiology** □ Definition and scope. □ Principles of Epidemiology and Epidemiological methods, Uses of Epidemiology **Socio-Economical &Cultural Issues related to Morbidity owing to the Physical** Disability & Handicaps of Structural /Neuro-motor &Psycho-somatic origin:	18 hours

	□ Health problem in vulnerable groups □ Pregnant & lactating women, Pelvic floor Dysfunction, Urinaryincontinence, □ Pre-term babies with high risk, Infants &Pre-School Children-Brain Damage, during birth injury	
2	**Demography and Family Planning** □ Family planning-objectives of national family planning programme □ Family planning methods: A general idea of advantage and disadvantages of the methods. **Immunization programmes –** children & hospital staff. **Occupational Health:** □ Occupational hazards, □ Occupational diseases □ Prevention of occupational diseases. □ Social security and other measures for the protection from occupational hazard accidents and diseases, □ Compensation acts.	10 hours
3	**Hospital waste management** □ Sources of hospital waste, Health hazards, Waste Management **Disaster Management** □Natural and man-made disasters □ Disaster impact and response □ Relief phase □ Epidemiologic surveillance and disease control, Nutrition, Rehabilitation, Disaster preparedness **Health Education** □ Concepts, aims and objectives □ Approaches to health education □ Models of health education □ Contents of health education □ Principles of health education □ Practice of health education	10 hours
4	**Addiction** – Alcoholism, Neuromotor, Psychosomatic disorders and Smoking **Mental Health** □ Characteristics of a mentally healthy person □ Types of mental illness □ Causes of mental ill health □ Preventive aspects □ Mental health services □ Alcohol and drug dependence **Nutrition and Health** □ Nutritional problems in public health □ Community nutrition programmes	10 hours

Text Books:

1.K. Park – Park 's Textbook of Preventive & Social Medicine

Reference Books:

1.P. K. Mahajan & M. C. Gupta – Textbook of Preventive & Social Medicine

SYLLABUS (3rd Semester)		
PAPER VI/NAME: EXERCISE THERAPY LAB-I		SUBJECT CODE: PHT242C311
SCHEME OF EVALUATION: (P)	CREDIT UNIT-4	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● After the course on exercise therapy student will be able to understand the different types of exercise for the benefit of patient in different situations and conditions both in health and disease or disorder.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● Following completion of this course a student will learn about various manipulative techniques , how to measure the joint range of motion . The students will also understand about the joint positions , muscle training and fitness training concepts .	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	a. To practice all the soft tissue manipulative techniques region wise - upper limb, lower limb, neck, back and face.	18 hours

	b. To practice the measurement of ROM of joints – upper limb, lower limb & trunk	
2	c. To practice the grading of muscle strength region wise – upper limb, lower limb and trunk. d. To study the position of joints, muscle work, and stability of various fundamental and derived positions.	10 hours
3	e. To study the different types of muscle contraction, muscle work, group action of muscles and co-ordinated movements. f. To practice the various types of suspension therapy and its application on various parts of body-region wise	10 hours
4	g. To study & practice local & general relaxation techniques. h. To study the structure & function along with application of various equipment in a gymnasium	10 Hours

Text Book:

1. Principles of Exercise Therapy – Dena Gardiner

2 Massage, manipulation & traction- Sydney Litch

3 Therapeutic Exercise Colby Kisner

Reference Books:

1.Clinical Kinesiology – Brunnstrom

2 Therapeutic exercise by Basmijjan& Wolf.

SYLLABUS (3rd Semester)		
PAPER VII/NAME: ELECTRO THERAPY LAB-I		SUBJECT CODE: PHT242C303
SCHEME OF EVALUATION: (P)	CREDIT UNIT-4	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
The course outline will help describe the students the Production &Physiological effects, Therapeutic uses, merits, demerits indication &contraindications of various low/medium Frequency Currents modes. It will also train the students to acquire an ability to select the appropriate mode as per the tissue specific & area specific application.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● Group Discussions ● Case Study	On completion of this course the candidate will acquire the knowledge of application of various electrotherapy modalities.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. To experience sensory and motor stimulation of nerves and muscles by various types of low frequency currents on self. 2. To locate and stimulate different motor points region wise including the upper and lower limb, trunk free.	18 hours
2	3. Therapeutic application of different low frequency currents, Faradic foot bath,Faradism under pressure, Ionotophoresis. 4. To study the reactions of degeneration of nerves to plot strength duration curves. 5. To find chronaxie and Rheobase.	10 hours
3	6. To study a hydrocollator unit, its operations and therapeutic application of Hot packs-region wise.	10 hours

	7. To study the various types of Infrared lamps and their application to body region wise. 8. To study paraffin wax bath unit, its operation, and different methods of application-regions wise.	
4	9. To study the different types of Ultra violet units,their operation, assessment of test dose and application of UVR-region wise. 10. To study TENS stimulations, its operation and application – region wise.	10 hours

Text Book:

1. Therapeutic Exercises Foundation and Techniques – Kisner and Colby-F.A Davis.

3. Principle of Exercise Therapy- Gardiner – C.B.S Delhi.

Reference Books:

1. Practical Exercise Therapy Hollis- Blacwell Scientific Publications.

2. Therapeutic Exercise – Basmajian- Williams and Wilkins.

SYLLABUS (4TH Semester)		
PAPER I/NAME: PATHOLOGY-II		SUBJECT CODE: PHT242C401
SCHEME OF EVALUATION: (T)	CREDIT UNIT-2	L-T-P-C:1-1-0-2

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
The objective of the course is to introduce students to acquire knowledge of the Pathology and learn to apply these knowledge into practice.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● Group Discussions ● Case Study	On completion of this course students will be expected to acquire knowledge of the Pathology and practice its application on practical field.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Bone and Joints: Autoimmune diseases, septic arthritis, Osteomyelitis 2. Skin Leprosy	18 hours
2	3. Urinary system 4. Central nervous system : CNS infections, vascular disorders	10 hours
3	5. Rheumatoid Arthritis 6. Scleroderma and Psoriasis	10 hours
4	7. Diseases of muscle: Poliomyelitis, Myopathies 8. Congenital heart disease	10 Hours

Text Books:

1) General Pathology – Walter & Israel – Churchill Livingstone

2) Muirs Textbook of Pathology –Anderson – Edward Arnold Ltd.

Reference Books:

1) Pathology: Implications for Physical Therapists – Goodmann and Boissonnault – W.B Saunders
2) Textbook of Pathology - Harsh Mohan –Jaypee Brothers

SYLLABUS (4TH Semester)		
PAPER II/NAME: MICROBIOLOGY-II		SUBJECT CODE: PHT242C402
SCHEME OF EVALUATION: (T)	CREDIT UNIT-2	L-T-P-C:1-1-0-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of the course is to introduce students to acquire knowledge of Microbiology and learn to apply these knowledge into practice.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	On completion of this course students will be expected to acquire the knowledge of the Microbiology and learn to practice its application in practical field.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination : 10% ● Attendance:5% ● End Term Examinatio n: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Non-specific immunity 2. Immunity-natural and acquired	10 hours
2	3. Allergy and hypersensitivity 4.Outline of common pathogenic bacteria and diseases produced by them: Treatment and prevention of:	10 hours

	a) Respiratory tract infections b) Meningitis	
3	5. Outline of common pathogenic bacteria and diseases produced by them: Treatment and prevention of: A) Enteric Infections B) Anaerobic infections C) Urinary tract infections D) Leprosy, tuberculosis and miscellaneous infections E) Wound infections F) Sexually transmitted diseases G) Hospital acquired infections	18 hours
4	6. Pathogenic yeast's and fungi 7. Virology–Virus infections with special mention of Hepatitis, Poliomyelitis & Rabies.	10 Hours

Text Books:

1) Essential of Medical Microbiology – Bhatia &Lal – Jaypee Brothers.
2) Medical Microbiology –Mims –Jaypee Brothers

Reference Books:

1) Microbiology :An introduction for the Health Sciences – Ackerman and Richards – W.B. Saunders Co.

SYLLABUS (4TH Semester)		
PAPER III/NAME: EXERCISE THERAPY-II		SUBJECT CODE: PHT242C403
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
This course will help the studentanalyze normal human posture [static &dynamic] & various normal musculo skeletal movements during Gait, activities of daily living, & describe the movements of the thorax during breathing. It will also describe the biophysical properties of connective tissue, effect of mechanical loading, factors influencing the muscle strength, mobility of articular &peri-articular soft tissues.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	Following completion of the course the students will learn about the various manual therapeutic techniques used in rehabilitation of patients. The curriculum will also provide knowledge regarding yoga and various specialized techniques used in physiotherapy like hydrotherapy, PNF, mobilization and manipulation, and group therapy .	● Continuous Evaluation : 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid-Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	Therapeutic Exercises 1. Principles, classification, techniques, physiological & therapeutic effects, indications & contraindications of therapeutic exercises. 2. Assessment & evaluation of patient (region wise) to plan a therapeutic exercise programme. 3. Joint Mobility – Etiogenesis of Joint stiffness , general techniques of mobilization , effects, indications, contraindications & precautions. 4. Muscle Insufficiency – Etiogenesis of muscle insufficiency (strength, tone, power, endurance & volume), general techniques of strengthening, effects, indications, contraindications & precautions.	18 hours

	5. Neuro-muscular Inco-ordination-Review normal neuromuscular coordination, Etiogenesis of neuromuscular in co-ordination & genetic therapeutic techniques, effects, indications, contraindications & precautions. 6. Functional re-education – General therapeutic techniques to re- educate ADL function	
2	Posture, Balance, Gait: 1. Normal Posture – Overview of the mechanism of normal posture. 2. Abnormal Posture – Assessment, Types, Etiogenesis, management including therapeutic exercise. 3. Static and Dynamic Balance – Assessment & management including therapeutic exercises. 4. Gait – Overview of normal gait & its components. 5. Gait deviations – Assessment ,types , etiogenesis, management including therapeutic exercises. 6. Types of walking aids, indications, effects and various training techniques	10 hours
3	Hydrotherapy 1. Basic Principles of fluid mechanics, as they relate to hydrotherapy 2. Physiological & therapeutic effects of hydrotherapy including joint motility, muscle strengthening & wound care etc. 3. Types of Hydrotherapy equipment, indications, contraindications, operation skills & patient preparation	10 hours
4	Special Techniques 1. Introduction to special mobilization & manipulation techniques, effects, indications & contraindications. 2. Conceptual framework, principle of proprioceptive neuromuscular facilitation (PNF) techniques, including indications, therapeutic effects and precautions. 3. Principles of traction, Physiological & therapeutic effects, classification, types, indications, contraindications, techniques of application, operational skills & precautions. 4. Review normal breathing mechanism, types, techniques, indications, contraindications, therapeutic effects & precautions of breathing exercises. 5. Group Therapy – Types, advantages & disadvantages. 6. Exercises for the normal person – Importance and effects of exercise to maintain optimal health & its role in prevention of diseases.Types, advantages, indications, contraindications & precautions for all age groups. 7. Introduction to Yoga – Conceptual framework, various "asanas", the body- mind relationship, effects & precautions.	10 Hours

Text Books:

1. Therapeutic Exercises Foundation and Techniques – Kisner and Colby-F.A Davis.
2. Principle of Exercise Therapy- Gardiner – C.B.S Delhi.

Reference Books:

1. Practical Exercise Therapy Hollis- Blacwell Scientific Publications.

2. Therapeutic Exercise – Basmajian- Williams and Wilkins.

SYLLABUS (4TH Semester)		
PAPER IV/NAME: ELECTROTHERAPY-II		SUBJECT CODE: PHT242C404
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:2-1-0-3

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of the course is to introduce students to acquire knowledge of operations of high frequency electro therapy modalities and learn to apply these knowledge into practice. Students will also gain knowledge regarding the neuro physiology of electrical stimulation and electro diagnosis.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	On completion of this course outline the students will understand the concept of pain control using electrical modalities . They will also be expert in decision making regarding the application of modalities.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Review of Neuro- muscular Physiology including effects of electrical stimulation. 2. Physiological responses to heat gain or loss on various tissues of the body. 3. Therapeutic effects of heat, cold and electrical currents. 4. Physical principles of Electro- magnetic radiation 5. Physics of sound including characteristics and propagation	10 hours
2	1. High frequency currents (S.W.D and M.W.D) – Production , biophysical effects, types, Therapeutic effects, techniques of application, indications, contraindications, precautions, operational skills and patient preparation	18 hours

	2. Medium frequency currents (Interferential Therapy) – conceptual framework of medium frequency current therapy, production, biophysical effects, types theurapeutics effects, Techniques of application, indications, Contraindications, Precautions, operational skills and patient preparation. 3. High frequency sound waves (Ultrasound) – Production, biophysical effects, types, therapeutic effects, Techniques of application, indications, contraindications, precautions, operational skills and patient preparation	
3	1. Cryotherapy: Definition, Principle- Latent heat of fusion, Physiological & Therapeutics effects, Techniques of Applications, Indications & Contraindications, Dangers, and Methods of application with dosage. 2. Fluidotherapy: Construction, Method of application, Therapeutic uses, Indications & Contraindications. 3. Whirlpool bath : Methods of application, Therapeutic uses, Indications & Contraindications 4. Russian and rebox current: Methods of application, Therapeutic uses, Indications & Contraindications 5. LASER: Define LASER. Types of LASER. Principles of Production. Production of LASER by various methods. Methods of application of LASER. Dosage of LASER. Physiological &Therapeutic effects of LASER. Safety precautions of LASER. Classifications of LASER Energy density & power density. 6. Contrast Bath: Methods of application, Therapeutic uses, Indications & Contraindications.	10 hours
4	1. Electro-Diagnosis – Instrumentation, definition & basic techniques of E.M.G and E.N.G 2. Bio-Feedback – Instrumentation, principles, Therapeutic effects, indications, contraindications, limitations, precautions, operational skills and patient preparation	10 Hours

Text Book:

1. Electrotherapy Explained: Principles &Practice – Low & Reed – Butterworth Heinemann.

2. Clayton's Electrotherapy,(9*t*h edi.) Forster &PalastangaBailliereTindall.

Reference Books:

1. Therapeutic Heat and cold – Lehman- Williams & Wilkins.

2. Principles and Practice of Electrotherapy- Kahn – Churchill Livingstone.

SYLLABUS (4TH Semester)		
PAPER V/NAME: PHARMACOLOGY-I		SUBJECT CODE: PHT242C405
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:-1-1-0-2

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
.The objectives of the course is to introduce students to acquire knowledge of Pharmacology and learn to apply these knowledge into practice.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● Case Study	On completion of this course the students will learn the pharmacological effects of commonly used drugs by patients referred for Physiotherapy, list their adverse reactions, precautions to be taken & contraindications. The students will also learn formulation& route of administration and utilization of the gained knowledge.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1) General action of drug 2) Drug allergy and idiosyncracy	10 hours
2	3. Drug toxicity 4. Metabolic rate of drug	10 hours
3	5. Methods of administration 6. Chemical character of drugs .	10Hours
4	7.Drugs acting on Central nervous system- anaesthetics, alcohols, alkaloids, narcotics, antipyretics, hypnotics, sedatives, anticonvulsants, stimulants, psychotherapeutics	18Hours

Text Book:

1.Essentials of Medical Pharmacology – K. D. Tripathi

2 Pharmacology and Pharmaco therapeutics – R.S. Satoskar

Reference Books:

1.Pharmacology principle of Medical practice – by Krantx&Carr

2. Pharmacological basis of Therapeutics – by Goodman, L.S. Gilman A.

SYLLABUS (4th Semester)		
PAPER VI/NAME: EXERCISE THERAPY LAB-II		SUBJECT CODE: PHT242C411
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
The students will learn variousnormalmusculo skeletal movements during Gait, activities of daily living, & describe the movements of the thorax during breathing. They will also acquire knowledge regarding thebiophysical properties of connective tissue, effect of mechanical loading, factors influencing the muscle strength, mobility of articular &peri-articular soft tissues. The course will describe the physiological &therapeutic uses, merits /demerits of various exercise modes.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	On completion of this course students will be expected to gain knowledge regarding various techniques and tools of exercise therapy .	● Continuous Evaluation: 15%- (Assignment , Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examinatio n: 10% ● Attendance:5 % ● End Term Examinati on: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. To practice assessment & evaluative procedures, including motor, sensory, neuromotor co-ordination, vital capacity, limb length & higher functions.	18 hours

	2. To study & practice the various techniques of mobilization of joints regionwise. 3. To study & practice the various techniques of progressive strenghting exercises of muscles region wise.	
2	4. To study & practice the use of various ambulation aids in gait training. 5. To assess & evaluate ADL's and practice various training techniques 6. To study & practice mat exercises.	10 hours
3	7. To assess & evaluate normal & abnormal posture & practice various corrective techniques. 8. To assess & evaluate equilibrium/ balance & practice various techniques to improve balance. 9. To study the structure & functions of hydrotherapy equipments& their applications	10 hours
4	10. To study & practice various traction techniques, including manual mechanical & electrical procedure 11. To study & practice various group exercise therapies 12. To practice & experience effects of basic yoga "asanas 13. To study plan & practice exercise programmes for normal person of various age groups**.**	10 Hours

Text Book:

1. Therapeutic Exercise by Carolyn Kisner
2. Principles of Exercise therapy – Dena M. Gardiner

Reference Books:

1.Therapeutic exercise by Basmijjan& Wolf.

2. Muscle testing by Daniel Kendall

SYLLABUS (4th Semester)		
PAPER VII/NAME: ELECTRO THERAPY LAB-II		SUBJECT CODE: PHT242C412
SCHEME OF EVALUATION: (P)	CREDIT UNIT-4	L-T-P-C:0-0-2-2

Course Objectives	Teaching Learning Process	Learning Outcome	Course Evaluation
● The objectives of the course are to introduce students to acquire knowledge of the Electrotherapy practical and enable them to practice application in human body parts.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	● On completion of this course students will be expected to gain knowledge regarding various electrotherapy modalities, the indications, contraindication and the application structures.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination : 10% ● Attendance:5% ● End Term Examinatio n: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. To study a short wave diathermy unit, its operation and different methods of application – region wise. 2. To study a Micro wave diathermy unit, its operation unit, its operation and different methods of application – region wise.	18 hours
2	3. To study a Ultrasound unit, its operation, its operation and different methods of application – region wise. 4. To study a laser unit, its operation and different methods of application – region wise. 5. To study various forms of therapeutic cold application region wise including-ice, cold packs, vapour coolant sprays,etc.	10 hours
3	6. To study a Intermittent therapy unit, its operation and different methods of application- region wise. 7. To study Interferential pneumatic therapy unit, its operation and different and different methods of application- region wise.	10 hours
4	8. To observe various Electro- myography (EMG) procedures. 9. To observe various Electro- neurography (ENG) procedures. 10. To study a Bio feedback unit, its operation and different methods of application- region wise.	10 hours

Text Book:

1. Electrotherapy Explained: Principles &Practice – Low & Reed – Butterworth Heinemann.

2. Clayton's Electrotherapy,(9*t*h edi.) Forster &PalastangaBailliereTindall

Reference book :

1.Clinical Electro Therapy-by Nelson & Currier

2 Electrotherapy – Evidence Based Practice – Sheila Kitchen

SYLLABUS (BPT 5th Semester)
PAPER I/ PAPER NAME:GENERAL SURGERY, OBSTETRICS & GYNAECOLOGY
SUBJECT CODE: PHT242C501 CREDIT UNIT-3
L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
To introduce students to acquire knowledge of the general surgical procedures and enable the students to understand the concepts of various surgical conditions like abdominal surgeries, vascular surgeries , thoracic surgeries and also gynaecological as well obstratical surgeries.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Expected to gain knowledge regarding various surgical procedures done over human body and also which all are the structures being cut and how to manage the post surgical patients . They are also expected to understand the basic physiology and mechanism of child birth.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Infection and inflammation-acute / chronic-signs, symptoms, complications & management. 2. Wounds and ulcers– classification, healing, management. 3. Abdominal Surgeries: Surgical anatomy of Anterior Abdominal wall; Surgical approaches; Common abdominal surgeries like Cholecystectomy, Colostomy, Ileostomy, Gastrectomy, Hernias, Appendicectomy, Neprectomy, Prostectomy. 4. Thoracic surgeries**:** Thoracotomy - Definition, Types of Incisions with emphasis to the site of incision, muscles cut and complications. A) Lung surgeries**:** • Pnumonectomy • Lobectomy, • Segmentectomy – Indications, Physiological changes and Complications • Thoracoplasty • Pleurectomy • Pleurodesis and Decortication of the Lung.	18 hours

	• Intercostal Drainage System B) Cardiac surgeries: • An overview of the Cardio-Pulmonary Bypass Machine • Extracardiac Operations: Closed Heart surgery, Open Heart surgery. • Transplant Surgery – Heart, Lung and Kidney – Indications, Physiological changes and Complications • Chest Injuries, evaluation, management.	
2	**Peripheral vascular diseases:** Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following diseases: □ Atherosclerosis □ Arteriosclerosis □ Buergers □ Raynauds □ Varicose veins & DVT **Burns and Plastic Surgery:** □ Burns- causes, classification, ward management, post burn contractures, various Reconstructive & plastic surgeries □ Skin grafts/flaps- pedicle/ Tube /Muscle flap Types, indications with special emphasis to burns/ wounds, ulcers, post surgical head, neck, face defects and reconstruction. □ Hypertropic scar & keloid – management c]-Principles of tendon transfers-with special emphasis to hand, foot & facial paralysis **Emergency Surgical Procedures:** Indications, steps, post operative care: Tracheostomy,Burr-hole Craniotomy,Cranioplasty, Deep brain stimulation, Shunting, Laminectomy, Hemilaminectomy, Microvascular decompression surgery, Embolization, Ablative surgery - Thalamotomy and Pallidotomy, Coiling of aneurysm and Clipping of aneurysm, Neural implantation	10 hours
3	**1. Anatomy of female genital system and pelvic floor** **2. Pregnancy:** Normal Gestations, Maternal Physiology in Pregnancy, Musculoskeletal disorders in Pregnancy, Antenatal Care,Prenatal and Perinatal Complications,Labour- Stages, Normal & Complications, Pain relief in Labour, Post Natal – Puerperium, Lactation. **3. Menopause:** Physiology, Complications, Effect on Various systems, Management **4. Uro-genital dysfunction** □ Uterine prolapse – classification & management (Conservative /Surgical) □ Cystocoele, Rectocoele, Enterocoele □ Urinary Incontinence: Types, Causes, Assessment and Management. □ Pelvic Inflammatory Diseases □ Polycystic Ovarian Disease (PCOD)	10 hours
4	**Surgical Procedures involving child birth** □ Caesarian Section	10 hours

	□ Episiotomy **Definition, Indications and Management of the following surgical procedures;** □ Dilatation and Curettage □ Hysterectomy – Total Abdominal and Vaginal Salphigectomy and oopherectomy Neoplasm of Female reproductive organs – surgical management □ Menstrual cycle and its Disorders □ Methods of family planning □Sterility – management □ Multiple gestations	

Text Books:

1.Clinical& Operative surgery by S. Das

2. Text book of Gynecology – by Dutta – New Central Book Agency

Reference Books:

1.Bailey & Love's short practice of Surgery-21st edn.

2.Text book of Obstetrics - by Dutta – New Central Book Agency

SYLLABUS (5th Semester)		
PAPER II/NAME: GENERAL MEDICINE		SUBJECT CODE: PHT242C502
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C: 2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
To introduce students to acquire knowledge of the causes, clinical presentation and treatment of various disease of the human body . The course will also enable students to understand the disease pathology and plan strategies to manage them	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to gain knowledge regarding various diseases affecting the human body, the clinical manifestation and the signs and symptoms. The students are also expected to learn the various treatment strategies for the above diseases.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Introduction of modes of transfer of communicable diseases & general preventive measures. 2. Bacterial Diseases: Tuberculosis, Leprosy, Rhematic fever, Tetanus, Typhoid fever, Diphtheria, Pneumonia, Bacillary Dysentry and Measles. 3. Viral Diseases: Simplex and zoster, Varicella, Measles Mumps, Hepatitis B &C,AIDS&Inflenza. 4. Metabolic and Deficiency Diseases: Diabetes, Anemia, Vitamin & Nutritional, Deficiency diseases, diseases of the endocrine glands	10 hours
2	1. Diseases of Respiratory System: Asthma, Bronchitis, Massive collapse of lungs, Bronchiectasis Bronchial, Pneumonia, lung abseess, Emphysema, Empyema, Paralysis of diaphragm & vocal cords, chronic infection of larynx and trachea, Abnormalities of trachea, infract of lungs, chronic passive congestion, chronic obstruction pulmonary disease, chest wall deformities. 2. Diseases of Circulatory System: Thromobsis, Embolism, Gangrene, Valvular diseases Hemorrhage, Heart Malformation, various diseases of arteries, diseases of blood forming organs, Anemia, Leukemia, Leucocytosis, Peripheral vascular diseases, diseases of the lymphatic systems.Diseases of the heart-	14 hours

	Hypertension, Hypotension, Aortic aneurysm, Endocarditis, Pericarcitis, Aortic Regurgitation, Cardiac Failure, coronary heart diseases, congenital heart malformation and its manifestation.	
3	1. Disease of skin:-Characteristics of normal skin, abnormal changes, types of skin lesions. 2. Conditions – Leprosy, Acne , Boil, Carbuncles, Impetigo , Infections of skin, Herpes, Urticaria, Psoriasis, Skin disorders associated with circulatory disturbances, Warts, Com. Defects in Pigmentation Psoriasis Leucoderma, Fungal infections, Alopecia, Dermatitis Eczema, Skin – Allergies, Venereal.	14 hours
4	1. Diseases of Digestive System: Pharyngitis, spasm of the Oesophagus, Diverticulum stenosis, Gastric ulcer, HemetemesisPeloric stenosis, Dyspepsia, Vomiting, Diarrhoea, Doudenal ulcer etc. 2. Diseases of Liver: Jaundice Cirrhosis of liver, Abscess of liver, Ascitis. 3. Diseases of kidney :Plyuria, Hematuria, Uremia, Anuria, Nephritis, Urinary infections, Urinary calculi of application-region wise.	10 hours

Text Book:

1. Davidson’s Principles and Practices of Medicine – Edward – Churchill Livingstone
2. Hutchinson’s Clinical Methods – Swash- Bailliere Tindall

Reference Books:

1.API - Text book of Medicine – 5th edition

2 Golwalla – Medicine for students

SYLLABUS (5th Semester)		
PAPER III/NAME: PHARMACOLOGY-II		SUBJECT CODE: PHT242C503
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:1-1-0-2

Course Objectives	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
The objectives of the course is to introduce students to acquire knowledge of Pharmacology and learn to apply these knowledge into practice.	● Lecture ● Assignment ● Individual / Group Presentation ● Quiz ● GroupDiscussions ● CaseStudy	On completion of the course the students will gain the knowledge of various Drugs used in various disorders , their uses, side effects and side effects.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance:5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Drugs acting on peripheral nervous system – stimulating and inhibiting cholinergic and anticholinergic activity 2. Drugs acting on Neuromuscular junction and muscles	18 hours
2	1. Drugs acting on cardiovascular system 2. Drugs acting on respiratory system	10 hours
3	1. Chemotherapeutic agents 2. Hormones	10 Hours
4	1. Drugs affecting endocrine functions 2. Vitamins	10 Hours

Text Book:

1.Essentials of Medical Pharmacology – K. D. Tripathi

2. Pharmacology and Pharmaco therapeutics – R.S. Satoskar

Reference Books:

1.Medical Pharmacology by Drill

2 Pharmacology principle of Medical practice – by Krantx&Carr

SYLLABUS (5th Semester)		
PAPER IV/NAME:CLINICAL ORTHOPAEDICS		SUBJECT CODE: PHT242C504
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C: 2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
To introduce students to acquire knowledge of the Orthopedic problems and enable them to practice application in human body. The students will be able to discuss the patho-physiology, clinical manifestations & conservative/Surgical management of various traumatic & cold cases of the Musculo-skeletal Conditions.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to gain knowledge expected to gain knowledge regarding various orthopaedic disorders of the human body , the signs and symptoms and the treatment procedure	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Introduction to Orthopedics: Introduction to orthopedic terminology,Types of pathology commonly delt with, clinical examination, common investigations X- rays& imaging techniques and outline of non operative management 2. Principles of operative treatment: List indications, Contraindication and briefly outline principles of Athrodesis, Arthroplasty, Osteotomy, Bone grafting, Tendon- Transfers and Arthroscopy. 3. Sprains and Muscle strains: List common sites of sprains and muscle strains describe the clinical manifestations and treatment	20 hours

	Viz. tennis elbow, golfer's elbow, Dequervan's disease, tenovaginities, trigger finger, carpal turnel syndrome and plantar fasciitis 4. Sports Injuries: Injuries related to common sports their classification and management	
2	**Fractures and dislocations:** General Principles, Outline the following. • Types of fractures including patterns ,Open and close fractures and fracture- dislocations. • Differences between dislocation subluxation. • General & Local signs & symptoms of fractures & dislocation. • Principle of management of fratures& dislocations. • Prevention & treatment of complication including : Fracture-disease • ,Volkman'sischeamic contracture, Sudeek's Atrophy Carpal Tunnel Syndrome.MyositisOssificans and shoulder- hand syndrome. • Fracture healing. **Upper Limb Fracture & Dislocations:** □ Enumerate major long bone fractures and joint injuries. □ Briefly describe their clinical features, principles of management and complications **Lower Limb Fracture & Dislocations:** □ Enumerate major long bone fractures and joint injuries. □ Briefly describe their clinical features, principles of management and complications. **Spinal Fractures and Dislocations:** Outline the mechanism, clinical features, principles of management and complications of spinal injuries. **Recurrent Dislocations:** Outline the mechanism, clinical features, principles of management and complications of recurrent dislocation of the shoulder and petalla.	15 hours
3	1. Amputations a) Classify amputations: List indication for surgery. b) Outline pre-operative, operative and prosthetic management. c) Outline prevention and treatment of complications. 2. Bone & Joint Infections: Outline the etiology, clinical features, management and complications of septic arthritis osteomyelitis. Tuberculosis (including spinal TB) 3. Bone Joint Tumors: Classify and outline the clinical feature, management and complications of the following(benign/malignant bone and joint tumors, osteomas, osteosarcomas, osteoclastomas, Ewing's sarcoma, multipiemyeloma.	5 hours
4	1. Chronic Arthritis: Outline of pathology: Clinical features, mechanism of deformities, management and complications of Rheumatoid arthritis, Osteoarthritis of major joints and spine, Ankylosing spondylitis.	20 hours

	2. Neck & Back Pain, Painful Arc syndrome, Tendonitis, Facitis& Spasmodic Torticolls .Outline the above including clinical features and management. 3. Spinal Deformities: Classify spinal deformities and outline the salient clinical features, management and complications of Scoliosis, Kyphosis and Lordosis. 4. Poliomyelitis: Describe the pathology, microbiology, prevention, management and complications of polio. Outline the treatment of residual paralysis including use of orthoses. Principles of muscle transfer and corrective surgery 5. Congenital Deformities: Outline the clinical features and management of CTEV, CDH, flat foot, vertical talus, limb deficiency radial club hand and femoral, tibial and tibula deficiencies meniagomyeloceleArthogryphosis multiplex congentia and Osteogensisimferfecta. 6. Peripheral Nerve Injuries: Outline the clinical features and management, including re- constructive surgery of • Radial, madian and ulnar nerve lesions. • Sciatic and lateral popliteal lesions. • Brachial Plexus injuries including Hrbs, Klumpke'scruchpalsy. 7. Hand injuries: Outline of clinical features, management and complications of skin and soft tissue injury, tendon injury, bone and joint injury. 8. Leprosy: Outline of clinical features, management and complications of neutritis, muscle paralysis, tropic ulceration and hand & feet deformities.	

Text Book:

1.Text book of Orthopedics.—Maheswari.

2 Textbook of Orthopedics and Traumatology— M.N.Natarajan

Reference Books:

1.Apley`s textbook of Orthopaedics

2 Outline of Fractures - John Crawford Adams.

3 Outline of Orthopedics.— John Crawford Adams.

SYLLABUS (5TH Semester)		
PAPER V/NAME: CLINICAL EDUCATION-I PHT242C511	SUBJECT CODE:	
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to learn to assess, evaluate, diagnose and manage different patients from different department, learn the expertise to frame exercise therapy and electrotherapy protocols.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

Description:

Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati. In the clinical posting all the students will learn to assess, evaluate, diagnose and manage different patients from different department. The students will learn the expertise to frame exercise therapy and electrotherapy protocols. The students will be enable to provide evidence based practice.

Bachelor Degree in Physiotherapy (BPT)

Programme Structure

SIXTH SEMESTER							
Sl.No.	**Subject Code**	**Names of subjects**	**L**	**T**	**P**	**C**	**TCP**
Core Subjects							
1	PHT242C601	CLINICAL CARDIOLOGY AND PULMONARY DISORDERS	**2**	**1**	**0**	**3**	**3**
2	PHT242C602	NEUROLOGY AND NEUROSURGERY	**2**	**1**	**0**	**3**	**3**
3	PHT242C603	SPORTS AND SPORTS PHYSIOLOGY	**2**	**1**	**0**	**3**	**3**
4	PHT242C604	PEDIATRICS AND PSYCHIATRY	**2**	**1**	**0**	**3**	**3**
6	PHT242C611	CLINICAL EDUCATION-II	**0**	**0**	**2**	**2**	**0**
Ability Enhancement Compulsory Courses (AECC)							
7	CEN982A601	COMMUNICATIVE ENGLISH-VI	1	0	0	1	1
Ability Enhancement Elective Courses (AEEC)							
8	PHT242S601	ILD-2	2	0	0	2	2
9	PHT242S602	FRENCH-2	2	0	0	2	2
10	PHT242S603	LATEX	2	0	0	2	2

11	PHT242S604	ANY OTHER COURSE OFFERED BY OTHER SCHOOLS OF RGU AND OPTED BY STUDENT	2	0	0	2	2
Generic Elective							
12	PHT242G601	GE-1 (RESEARCH METHODOLOGY)	**3**	**0**	**0**	**3**	**3**
13	PHT242G602	GE-2 (FIRST AID)	**3**	**0**	**0**	**3**	**3**
	TOTAL					**46**	

SYLLABUS (6thSemester)
PAPER I/NAME: CLINICAL CARDIOLOGY AND PULMONARY DISORDERS SUBJECT CODE: PHT242C604 SCHEME OF EVALUATION: (T) CREDIT UNIT-3 L- T-P-C:2-1-0-3

Course Objective	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
To introduce students to acquire knowledge of the Etiology, Pathophysiology, Signs & Symptoms, Clinical Evaluation & Management of the various Rheumatological, Cardiovascular and Respiratory Conditions.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to gain knowledge regarding various disorders of the cardiovascular and respiratory system. They are also expected to learn about the method of treatment of these disorders.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	DISEASES OF THE CARDIO-VASULAR SYSTEM Examination of Cardiovascular System ECG – Normal & Variations due to ischemia &infarction Stress Test Definition, Etiology, Clinical Features, Complications, Management of the following Cardio-vascular diseases: I.H.D.–Myocardial infarction Valvular Heart Disease – i) Congenital ii) Acquired	20 hours

2	DISEASES OF THE CARDIO-VASULAR SYSTEM Rheumatic Fever & Rheumatic Heart Disease Infective Endocarditis Congenital Heart Diseases Unstable Angina	15 hours
3	DISEASES OF THE RESPIRATORY SYSTEM Examination of Respiratory System Introduction of clinical examination– Breath sounds, X ray chest, ABG, PFT	5 hours
4	DISEASES OF THE RESPIRATORY SYSTEM Patterns of Respiratory Diseases: Obstructive & Restrictive Definition, Etiology, Clinical Features, Complications, Management of Diseases of the respiratory system : Common Infectious diseases like Tuberculosis, Pneumonia, Lung Abscess, Bronchiectasis. Diseases of Pleura like Pleural Effusion, Pneumothorax, Hydropneumothorax, Empyema. Obstructive Lung Diseases like Bronchitis, Emphysema, Bronchial Asthma, Cystic Fibrosis. Interstitial Lung Diseases Respiratory Failure: Definition, Types, Causes, Clinical Features, Diagnosis and Management Intensive Medical Unit – Infrastructure & Treatment Arrhythmia – classification. Occupational lung diseases like Silicosis Asbestosis, Pneumoconiosis, Brucellosis, Farmer's Lung	20 hours

Text Book:

1.Principles& Practice of Medicine – 16thedn - by Davidson

2.Golwalla – Medicine for students

Reference Books:

1.API - Text book of Medicine – 5th edition

2.Clinical Medicine :- P. J. Mehta

SYLLABUS (6thSemester)
PAPER II/NAME: NEUROLOGY AND NEUROSURGERY SUBJECT CODE: PHT242C602 SCHEME OF EVALUATION: (T) CREDIT UNIT-3 L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation

To introduce students to acquire knowledge of the describe Etiology, Pathophysiology, Signs & Symptoms & Management of the various Neurological and Paediatric conditions.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to gain knowledge regarding various disorders of the nervous system their symptoms and sign. The students are also expected to know about the treatment of the diseases.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Cerebro –vascular accidents** Define: Stroke, TIA, RIA, Stroke in evolution, Lacunar infarct. Risk Factors, Causes, Investigations, Differential Diagnosis, Management- Medical & Surgical, Complications **Movement Disorders** Definition, etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of following disorders : □ Parkinson's disease □ Dystonia □ Chorea □ Ballismus, □ Athetosis □ Tics, Myoclonus □ Wilson's disease **Polyneuropathy** □ Classification of Polyneuropathies □ Causes, clinical features, management of GBS, Diabetic and Alcoholic Neuropathy	20 hours
2	**Disorders & Diseases of muscle** □ Classification, investigations, imaging methods, Muscle biopsy, management of muscle diseases, genetic counselling. □ Classification, etiology, signs & symptoms of Muscular dystrophy and Myotonic dystrophy **Motor neuron diseases** Etiology, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, and complications of following disorders: □ Amyotrophic lateral sclerosis □ Spinal muscular atrophy □ Hereditary bulbar palsy □ Neuromyotonia	15 hours

	□ Post-irradiation lumbosacral polyradiculopathy. **Multiple Sclerosis** Etiology, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, and complications	
3	**Infections of brain and spinal cord** Etiology, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of following disorders: □ Meningitis □ Encephalitis □ Neurosyphilis □ Herpes □ HIV infection □ Poliomyelitis and Post-polio syndrome □ Leprosy □ Tetanus **Higher cortical, neuro psychological and neurobehavioral disorders** □ Physiological nature of Epilepsy, classification, clinical features, investigations, medical& surgical management of following disorders – Non-epileptic attacks of childhood, Epilepsy in childhood, Seizers, and Epilepsy syndromes in adult. □ Classification and clinical features of Dementia, Alzheimer's disease. □ Causes & investigations of Coma, criteria for diagnosis of Brain death. **Cerebellar & Co-ordination disorders** □ Congenital Ataxia □ Friedrich's Ataxia □ Tabes dorsalis **Disorders of lower cranial nerves & Special Senses** Etiology, clinical features, investigations, and management of following disorders □ Trigeminal neuralgia □ Lesions in facial nerve: Facial palsy, Bell's palsy, Hemi facial spasm □ Glossopharangial neuralgia □ Lesionns of Vagus, Spinal accessory nerve, Hypoglossal nerve. □ Disorders of special senses	5 hours
4	**Disorders of Myoneural Junction** Etiology, classification, signs & symptoms, investigations, management, of following Disorders: □ Myasthenia gravis □ Eaton-Lambert syndrome □ Botulism **Spinal cord Disorders**	20 hours

	□ Functions of tracts :Definition, etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of following disorders: □ Spinal Cord Injury , □ Epidural abscess, □ Transverse myelitis, □ Spina bifida, □ Conus medullaris syndrome □ Bowel & Bladder Dysfunction **Head injury** Etiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications. **Brain tumors and spinal tumors** Classification, clinical features, investigations, medical and surgical management.	

Text Book:

1.Davidson's Principles and Practice of Medicine

2 Illustrated Neurology & Neurosurgery: Lindsay

Reference Books:

1.Brains Diseases of Nervous System

2 Textbook of Neurology- Victor Adams

SYLLABUS (6th Semester)
PAPER III/NAME: SPORTS AND SPORTS PHYSIOLOGY SUBJECT CODE: PHT242C603 SCHEME OF EVALUATION: (T) CREDIT UNIT-3 L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation

To make the student able to identify, discuss & analyse, the musculo skeletal dysfunction in terms of Biomechanical, Kinesiological and Biophysical basis & co-relate the same with the provisional diagnosis. It will also help the students plan proposal to lay down rehabilitation protocol for sports specific injuries focusing an early rehabilitation to injuries.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to gain knowledge regarding various sports injuries .the student is expected to know that various rehabilitation guidelines for sports injuries and protocol for healthy and fit sportsmen.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Training the aerobic and anaerobic energy system 2. Physiological responses, changes & adaptations to various exercises - aerobic exercises & anaerobic exercises in Pulmonary, Cardiovascular, Neuromuscular system, Hormones	20 hours
2	1. Detraining effects of cardiovascular, musculoskeletal and nervous system 2. Sports specific training and cross training.	15 hours
3	**Musculoskeletal injuries** □ Pre–participation examination □ Causes & Mechanism of Sports Injuries, prevention of sports injuries to various structures. □ Common acute, chronic and overuse injuries in various sports at: • Shoulder girdle, Shoulder, Arm, Elbow, Forearm, Wrist & hand • Pelvis, hip, thigh, knee, leg, ankle & foot • Spine and Head • Thorax and Abdomen • Peripheral nerve injuries, injuries to muscles, ligament, tendon, bone, synovial joint structure(with physiological response to injury)	5 hours
4	**Cardiopulmonary** □Sporting emergencies & first aid □ Cardio pulmonary Resuscitation; Shock management, Internal and External bleeding, Splinting, Stretcher use–Handling and transfer, Management of Cardiac arrest, Acute asthma, epilepsy, drowning, burn, Medical management of mass participation. Heat stroke and Heat illness.	20 hours

	Body composition Different Body composition Various methods to estimate body composition : water displacement method, under water weighing method, skinfold method, surface anthropometry, bioelectrical impedence analysis, ultrasound assessment of fat, arm X-ray assessment of fat, CT assessment of fat	

Text Book:

1.Sport and physical therapy – Bernhardt Donna, Churchill Livingstone, London 1995

2. Sports physiotherapy :Applied science and practice – Maria Zuluaga

Reference Books:

1.Brownstein, B. Functional movement in Orthopaedic and Sports Physical Therapy: Evaluation, Treatment and Outcomes.New York; London: Churchill Livingstone, 1997 ISBN: 0443075301

2. Cash, M. Sport and Remedial Massage Therapy.London: Edbury, 1996 ISBN: 0091809568

SYLLABUS (6thSemester)		
PAPER IV/NAME: PEDITRICS AND PSYCHIATRY SUBJECT CODE: PHT242C604		
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation

This course will enable a student to describe etiology, pathophysiology, signs & symptoms & management of the various Neurological and Paediatric conditions.The student will be able to describe normal development &growth of a child, importance of immunization & breast-feeding & psychological aspect of development.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course students will be expected to gain knowledge regarding paediatric and psychiatric disorders.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Normal development & growth 2. Breast feeding and immunization 3. **Prenatal, Perinatal and Postnatal problems and management (**Birth injuries): Neck, shoulder dystocia, Brachial plexus injury, Fractures 4. Congenital abnormalities and management 5.Problems and management of LBW infants	20 hours
2	**Developmental Delay:** Etiology, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications **Respiratory conditions of childhood:** Pneumonias in children – Bacterial & Tubercular, Empyema, Asthma **Orthopedic and Neurological disorders in childhood, Clinical features and management ;** □ Cerebral palsy □ Meningitis □ Encephalitis □ Hydrocephalus □ Ataxia □ Arnold-chiari malformation □ Basilar impression & Cerebral malformations □ Dandy walker syndrome □ Down's syndrome □ Floppy infant □ GBS □ Poliomyelitis □ Epilepsy □ Neural tube defects in Paediatrics □ Muscular dystrophies & Neuropathy **Nutritional disorders of childhood**	15 hours

	Rickets and scurvy, PEM (Kwashiorkar and Marasmus) Infections – Congenital & Neonatal, Mental retardation Coma in Paediatrics and Acute rheumatic fever	
3	1. Psychiatric History, classification and mental status examination 2. Organic mental disorders (delirium, dementia, organic amnestic syndrome and other organic mental disorders) 3. Mood disorders (manic episodes, depressive episodes, bipolar mood disorders) 4. Neurotic stress related and somatoform disorders (Anxiety disorder, phobic anxiety disorders, obsessive compulsive disorders, adjustment disorders, dissociative disorders, somatoform disorders post-traumatic stress Disorder 5. Schizophrenia, delusional disorders and schizoaffective disorders.	5 hours
4	1. Substance use disorders, sexual disorders, sleep disorders and eating disorders. 2. Child psychiatry, (mental retardation, developmental disorders, attention deficit, hyperkinetic disorder, enuresis, conduct disorders) 3. Disorders of adult personality and behavior (specific personality disorders, habit and impulse disorders, gender identity disorders) 4. Stress, psychosomatic disorders, suicide, Psychopharmacological management	20 hours

Text Book:

1.Davidson's Principles and Practice of Medicine

2 Textbook of Neurology- Victor Adams

Reference Books:

1.Illustrated Neurology & Neurosurgery: Lindsay

2 Brains Diseases of Nervous System

SYLLABUS (6thSemester)
PAPER VI/NAME:CLINICAL EDUCATION-II SUBJECT CODE: PHT242C611

SCHEME OF EVALUATION: (T)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to learn to assess, evaluate, diagnose and manage different patients from different department, learn the expertise to frame exercise therapy and electrotherapy protocols.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

Description:

Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati. In the clinical posting all the students will learn to to assess, evaluate, diagnose and manage different patients from different department. The students will learn the expertise to frame exercise therapy and electrotherapy protocols. The students will be enable to provide evidence based practice.

Programme Structure

SEVENTH SEMESTER							
Sl.No.	**Subject Code**	**Names of subjects**	**L**	**T**	**P**	**C**	**TCP**
Core Subjects							
1	PHT242C701	COMMUNITY BASED REHABILITATION	**2**	**1**	**0**	**3**	**3**
2	PHT242C702	ETHICS IN PHYSIOTHERAPY& BASIC FIRST AID	**2**	**1**	**0**	**3**	**3**
3	PHT242C703	PHYSIOTHERAPY IN ORTHOPAEDICS CONDITION	**2**	**1**	**0**	**3**	**3**
4	PHT242C704	PHYSIOTHERAPY IN NEURO AND PSYCHOSOMATIC CONDITIONS	**2**	**1**	**0**	**3**	**3**
5	PHT242C711	COMMUNITY BASED REHABILITATION LAB	**0**	**0**	**2**	**2**	**4**
6	PHT242C712	PHYSIOTHERAPY IN ORTHOPAEDICS CONDITION LAB	**0**	**0**	**2**	**2**	**4**
7	PHT242C713	PHYSIOTHERAPY IN NEURO AND PSYCHOSOMATIC CONDITIONS LAB	**0**	**0**	**2**	**2**	**4**
8	PHT242C714	CLINICAL EDUCATION-III	**0**	**0**	**8**	**8**	**0**
Ability Enhancement Compulsory Courses (AECC)							
9	CEN982A701	COMMUNICATIVE ENGLISH-VII	1	0	0	1	1
Ability Enhancement Elective Courses (AEEC)							
DISCIPLINE SPECIFIC-DSE (ANY TWO)							
10	PHT242D701	ALLIED THERAPEUTICS	4	1	0	5	5
11	PHT242D702	PRINCIPLES OF BIOENGINEERING	4	1	0	5	5
12	PHT242D703	ORTHOTICS & PROSTHETICS	4	1	0	5	5
13	PHT242D704	REMEDIAL BIOLOGY	4	1	0	5	5
	TOTAL					**58**	

SYLLABUS (7th Semester)		
PAPER I/NAME: COMMUNITY BASED REHABILITATION		CODE: PHT242C701
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of the course is to introduce students to gain knowledge regarding rehabilitation from the prespective of the community. The students will also learn how to deal with problems of various young as well as elderly at the community level	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course students will be expected to gain knowledge regarding various aspects of women health , industrial health and community health.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Women's Health** Introduction to Woman's Health and Anatomy of pelvic floor. Anatomical and physiological variations associated with pregnancy and menopause. Antenatal, perinatal and postnatal physiotherapy and PT advice on labor positions, pain relief and PT Management of various problems faced in this period Uro-genital dysfunctions: Infections, Prolapse, Polycystic Ovarian Disease, incontinence and their therapeutic interventions. Common Gynecological surgeries and role of physiotherapy Physical fitness in women during pregnancy & menopause. Radical mastectomy and therapeutic intervention. **Geriatrics** Theories of Aging. Anatomical and Physiological changes of aging in – • Musculoskeletal system. • CNS • CVS • RS • Metabolic, Endocrine, Immune System Assessment in geriatrics Role of physiotherapy in geriatrics fitness (Institutionalized &	20 hours

	Community dwelling elders), Role of PT in: Half-way homes, Residential Homes, Meals on wheels, Home for the aged, etc. Falls and its prevention in Geriatrics. Rehabilitation for Parkinson's disease, Alzheimer's, Dementia, Incontinence, stroke etc.	
2	**Industrial Health** I – Ability Assessment Job description Job demand analysis Task analysis Ergonomic evaluation Injury prevention Employee fitness programme II – Disability management – Acute case Concept of functional capacity assessment Work conditioning Work hardening III – Environmental stress in the industrial area a. Occupational Hazards: Physical agents- Heat, cold, light, noise, Vibration, U.V. radiation, Ionizing radiation, Chemical agents-Inhalation, local action & ingestion, Mechanical hazards- overuse, fatigue. Psychological hazards – monotonic, dissatisfaction in job, anxiety of work completion with quality, mechanical stress in various occupations for eg. Sedentary table work –eg. in executives, clerk, Inappropriate seating arrangement- eg. vehicle drivers Constant standing- eg. watchman, Defense forces, surgeons, Over- eg. exertion in laborers.	15 hours
3	**Community Health** WHO definition of health & disease, Health care delivery system – 3 tier System *Rehabilitation: definition, types and Team * Community: Definition, Community based approach, * Community entry strategies, Community initiated v/s Community oriented programme Introduction to CBR: Definition, Historical review, Concept, Need, Objectives, Scope, Members, Models CBR strategies in Health Promotion • Urban area – UHC – Community centre, clubs, mahilamandals, social centers. Schools, Industries, Sport centers • Rural area by using PHC, rural hospital, district hospital. Principles of CBR, Difference between Community v/s Institutional Based Rehabilitation, Extension services and mobile units: Introduction, Need, Camp approach	5 hours

	□ Planning and management of CBR programme □ Disaster management and role of PT □ Disability : Evaluation, types & prevention & role of physiotherapy □ National policies for rehabilitation of disabled, architectural barrier for disabled and their modification.	
4	**Solidarity and cooperation** □ Solidarity in health care & Physiotherapy □ Ethical perspective o Solidarity as instrumental value o Solidarity as moral value □ Threats to solidarity in present-day societies **Social responsibility and health, Sharing of benefits** □ Highest attainable standard of health as a fundamental human right o Universal Declaration of Human Rights o WHO Constitution o Duty, obligation and responsibility physiotherapists for Highest attainable standard of health as a fundamental human right o Responsibilities for governments and various sectors of society o Health and contemporary challenges to global justice • Access to essential health services • The protection of vulnerable populations • Providing health care services across national boundaries □ Sharing of benefits o Models of benefit-sharing agreements • Fair and equitable options for research subjects • Biopiracy and fair sharing of benefits of genetic resources • Patents and intellectual property • Valid options for promoting fair and equitable access to new diagnostic and therapeutic modalities or to products stemming from them o Integration of capacity-building components to externally funded research and other initiative	20 hours

Text Book:

1.K. Park – Park ’s Textbook of Preventive & Social Medicine

Reference Books:

1. P. K. Mahajan & M. C. Gupta – Textbook of Preventive & Social Medicine

SYLLABUS (7th Semester)		
PAPER II/NAME:ETHICS IN PHYSIOTHERAPY& BASIC FIRST AID		
SUBJECT CODE: PHT242C702		
SCHEME OF EVALUATION: (T)	CREDIT UNIT-4	L-T-P-C:4-0-0-4

Course Objective	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**
The course outline will enable a students to understand the various ethical and legal aspects governing the physiotherapy profession. It will also allow the students to gain knowledge regarding the first aid related to any ememrgency medical care.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course students will be expected to gain knowledge regarding various ethical issues related to physiotherapy profession.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Concepts of morality, Ethics & Legality-rules of professional conduct & their Medico-legal &moral implications-The need of Council Act for Physiotherapy. 2. Constitution & Functions of the Indian association of Physical therapy	20 Hours
2	3.Functioning of the World Confederation of Physical therapy [W.C.P.T.] & its various branches-Special Interest groups 4. Role of W.H.O.& WCPT	15 hours
3	Introduction to First Aid – □ Assessment, immediate actions and the priorities. □ Bandages – Types, binders, splints & slings. □ Promoting safety consciousness. □ Instruments used in First Aid (First Aid kit). First Aid - □□RTA including fractures and spinal cord injuries □□Cardiac arrest,Respiratory failure □□Burns □□Shock- Electric, Hypovolemic and control ofBleeding, □□Poisoning	5 hours

4	□ Examination of Vital Signs. □□Snake Bite,Drowning, □□Hypothermia and Hyperthermia Medical Triage- concept of Emergency: □ Definition, Importance and rules □ Code tags and triage terminology □ Transportation of the injured	20 hours

Text Book:

1. Ethical issues : Vol 1 : Prespectives for Physiotherapist
2. First aid for basic sciences

Reference Books:

1. Essentials of community physiotherapy and ethics.
2. First aid and emergency nursing

SYLLABUS (7thSemester)		
PAPER III/NAME:PHYSIOTHERAPYIN ORTHOPAEDIC CONDITIONS		
SUBJECT CODE: PHT242C703		
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The student with this course outline will be able to know about the various diseases and disorders related to bone. Students will also learn about fractures and how to manage them. They will also be verged in providing treatment and care following orthopaedic impairments.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course students will be expected to gain knowledge regarding various disorders of bones and joints. They are also expected to know about the fractures of bones.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS

1	**Fractures and dislocation of the spine, extremities – classification, management & complications.** PT assessment and management of upper limb fractures and dislocations. PT assessment and management of lower limb fractures and dislocations including pelvis. PT assessment and management of spinal fractures PT management in complications - early and late - shock, compartment syndrome, VIC, fat embolism, delayed and mal-union, RSD, myositis ossificans, AVN, pressure sores etc. Principles of PT management in fractures - Guidelines for fracture treatment during period of immobilization and guidelines for treatment after immobilization period. **Physiotherapy Management of Deformities** Congenital: CTEV, CDH, Torticollis, pes planus, pes cavus and other common deformities. Acquired: scoliosis, kyphosis, coxa vara, genu varum, valgum and recurvatum. **Infectious diseases of the bone & joints** Osteomyelitis – acute and chronic Septic arthritis and Pyogenic arthritis TB spine and major joints - knee and hip	20 Hours
2	**Degenerative and Inflammatory conditions** Osteoarthritis - emphasis mainly on knee, hip and hand Rheumatoid Arthritis Ankylosing spondylitis Gout Perthes disease **Management of Peripheral Nerve Injury** **Amputation** Definition, levels, indications, types, PT assessment, aims, management pre And post operatively. PT management with emphasis on stump care and bandaging. Prosthesis Prescription and Training **Traction** Effect, Types, Modes, Indications, Contraindications, Dosage	15 hours
3	**Spinal conditions** PT assessment, aims, and conservative & surgical management and home program of the following conditions - Cervical spondylosis Lumbar spondylosis Intervertebral disc prolapse Spinal canal stenosis Spondylolisthesis Spondylolysis Coccydynia	5 hours

	Peripheral Joints PT assessment, aims, and conservative & surgical management and home program of all the peripheral joint (upper and lower limb) injuries and reconstruction surgeries	
4	PT Management for □ Sacro-iliac joint dysfunction □ Sacralisation □ Lumbarisation, □Tumours of the bone. **Orthopedic surgeries** Pre and post operative PT assessment, goals, precautions and PT management of following surgeries such as: □ Arthrodesis □ Osteotomy	20 hours

Text Book:

1.Physical Rehabilitation Assessment and Treament – O'Sullivan Schmitz

2.Orthopedic Physical therapy – by Donatelli.

Reference Books:

1.Outline of orthopedics – Adams Hamblen

2. Apley`s textbook of Orthopaedics

SYLLABUS (7thSemester)		
PAPER /NAME:PHYSIOTHERAPY IN NEURO AND PSYCHOSOMATIC CONDITIONS	SUBJECT CODE: PHT242C704	
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of this course are to introduce students acquire knowledge about various neurological disorders effecting human body systems and understand the physiotherapy management of the same. After following this course students will also gain knowledge regarding Psychosomatic disorders.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course students will be expected to gain knowledge regarding various disorders of human body related to the nervous system	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Structure and function of Nervous System 2. Theories of motor control & motor learning 3. Neurological Assessment □ Assessment of Higher mental functions, Cranial Nerves, □ Sensory system, Motor system, Reflexes, Co-ordination, □ Balance, functional abilities, neuropathic pain and investigation.	20 Hours
2	4. Understanding sensory system & Organization of sensory strategies for efficient motor output. 5. Skills of sensory – motor learning & Neuro-muscular skeletal training 6. Application of skills of Co-ordination & Balancing exercises by using techniques based on Neuro-physiological principles	11 Ours
3	7. Application of transfer & functional re-education exercises- Postural exercises, & Neurological Gait Assessment and management/ training 8. Principles of Application of Neuro therapeutic skills like PNF, NDT, Brunnstrom&Rood ’s approaches.	5 hours

	9. Principles and methods of using tools of Therapeutic gymnasium such as Vestibular ball, tilt board, bolsters, etc. in neurological conditions	
4	Evaluation & physiotherapy assessment with appropriate reasoning for planning & implementation of treatment technique for following neurological conditions: i. Cerebrovascular Accidents: □ Hemiplegia, □ Disorders of cerebral circulation □ Space occupying lesions ii. Disorders of spinal cord □ Spinal Cord Injury □ Syringomyelia, □ Transverse myelitis □ Sub-acute combined degeneration of spinal cord iii. Traumatic Head Injury iv. Infections of Nervous System □ Meningitis □ Encephalitis □ Neurosyphilis □ Tabes dorsalis □ Poliomyelitis and Post Polio Residual Paralysis □ Leprosy v. Demyelinating diseases of the nervous system Multiple sclerosis vi. Lesions of Extra-pyramidal system & Basal ganglia Parkinson's Disease □ Spasmodic torticolis □ Athetosis, □ Chorea & Dystonia vii. Degenerative disorders □ Motor Neuron Diseases □ Hereditary Ataxia □ Peroneal muscle atrophy, S.M.A vii. Degenerative disorders □ Motor Neuron Diseases □ Hereditary Ataxia □ Peroneal muscle atrophy, S.M.A viii. Disorders of Peripheral nerves □ Traumatic Nerve Injury, Tumors, □ Infective & Metabolic lesions of nerves ix. Disorders of muscles and neuromuscular junction □ Muscular Dystrophies □ Myasthenia Gravis & myasthenia syndrome x. Polyneuropathy □ Classification of Polyneuropathies □ GBS, Diabetic and Alcoholic Neuropathy xi.Cerebellar& Co-ordination disorders , Congenital Ataxia, Friedrich Ataxia	20 hours

Text Book:

1. Physical rehabilitation by Susan O Sullivan

2. Davidson's Principles and Practice of Medicine

3. Illustrated Neurology & Neurosurgery: Lindsay

Reference Books:

1.Brains Diseases of Nervous System

2 Textbook of Neurology- Victor Adams

SYLLABUS (7th Semester)		
PAPER V/NAME:COMMUNITY BASED REHABILITATION LAB-I		
SUBJECT CODE: PHT242C711		
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of the course is to introduce students to gain knowledge regarding rehabilitation from the prespective of the community. The students will also learn how to deal with problems of various young as well as elderly at the community level.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to gain knowledge regarding assessment and evaluation of disorders seen in the community.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

SUPERVISED CLINICAL TRAINING:

□□All the works should be properly documented, signed by the respective teacher in-charge of the subject, indexed in a separate file and should be submitted before the preliminary examination of the semester. It is the responsibility of the student to submit the file(s) to the teacher before the examination

□□Case Presentation & Documentation:

Evaluation and treatment planning, presentation and documentation of minimum **TEN** cases in

oObstetrics :- 2 cases

oGynaecology :- 2 cases

oGeriatrics :- 2 cases
oIndustrial health :- 2 cases
oFittness :- 1 case
oDisability evaluation :- 1 Case

Text Book:

1.Industrial Therapy – by Glenda Key

2. Preventive &Social Medicine –by Park

Reference Books:

1.Text book of community medicine &Community Health – by Bhaskar Rao

2. Disability 2000 - RCI.

3. Legal Rights of disabled in India-by GautamBannerjee.

SYLLABUS (7th Semester)		
PAPER V/NAME:PHYSIOTHERAPY IN ORTHOPAEDIC CONDITIONS LAB-I		
SUBJECT CODE: PHT242C712		
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objective of this course is to make the students understand about the assessment, evaluation and examination of various patients with orthopaedic problems. The students will also learn the treatment methodology for different bone and joint disorders.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	The objective of this course is to make the students understand about the assessment, evaluation and examination of various patients with orthopaedics and joints disorders.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

SUPERVISED CLINICAL TRAINING:
All the works should be properly documented, signed by the respective teacher in-charge of the subject, indexed in a separate file and should be submitted before the preliminary

examination of the semester. It is the responsibility of the student to submit the file(s) to the teacher before the examination.

 Evaluation & treatment planning: its presentation & documentation of Minimum **te**n cases in the following heads –

1. Upper Limb Fractures (Including hand injury),
2. Lower limb Fractures.
3. Soft tissue lesion (any),
4. Spine Fractures with/without Neurological condition
5. Degenerative arthritis of skeletal joint
6. Musculo – skeletal condition of Hand & foot.

Text Book:

1.Physical Rehabilitation Assessment and Treament – O'Sullivan Schmitz

2.Orthopedic Physical therapy – by Donatelli.

3.Orthopedic assessment by David Magee

Reference Books:

1.Outline of orthopaedics – Adams Hamblen

2. Apley`s textbook of Orthopaedic

SYLLABUS (7thSemester)		
PAPER V/NAME:PHYSIOTHERAPY IN NEURO AND PSYCHOSOMATIC CONDITIONS LAB-I	SUBJECT CODE: PHT242C713	
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objective of this course is to make the students understand about the assessment, evaluation and examination of various patients with neurological and psychosomatic disorders.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	The objective of this course is to make the students understand about the assessment, evaluation and examination of various patients with neurological and psychosomatic disease.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

SUPERVISED CLINICAL TRAINING:

All the works should be properly documented, signed by the respective teacher in-charge of the subject, indexed in a separate file and should be submitted before the preliminary examination of the semester. It is the responsibility of the student to submit the file(s) to the teacher before the examination

Evaluation & treatment planning; its presentation & documentation of minimum ten cases in following:

- U.M.N. lesion
- L.M.N. lesion,
- Paediatric Neuro case

Text Book:

1. Physical rehabilitation by Susan O Sullivan

1.Davidson's Principles and Practice of Medicine

2 Illustrated Neurology & Neurosurgery: Lindsay

Reference Books:

1.Brains Diseases of Nervous System

2 Textbook of Neurology- Victor Adams

SYLLABUS (7th Semester)		
PAPER V/NAME:CLINICAL EDUCATION-III	SUBJECT CODE: PHT242C713	
SCHEME OF EVALUATION: (P)	CREDIT UNIT-4	L-T-P-C:0-0-4-4

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to learn to assess, evaluate, diagnose and manage different patients from different department, learn the expertise to frame exercise therapy and electrotherapy protocols.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

Description:

Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati. In the clinical posting all the students will learn to to assess, evaluate, diagnose and manage different patients from different department. The students will learn the expertise to frame exercise therapy and electrotherapy protocols. The students will be enable to provide evidence based practice.

Bachelor Degree in Physiotherapy (BPT)

Programme Structure

8TH SEMESTER							
SL.NO.	**SUBJECT CODE**	**NAMES OF SUBJECTS**	**L**	**T**	**P**	**C**	**TCP**
CORE SUBJECTS							
1	PHT242C801	CLINICAL REASONING, EVIDENCE BASED PHYSIOTHERAPY, ADMINISTRATION AND TEACHING SKILLS	**1**	**1**	**0**	**2**	**2**
2	PHT242C802	PHYSIOTHERAPY IN SPORTS INJURIES	**2**	**1**	**0**	**3**	**3**
4	PHT242C803	PHYSIOTHERAPY IN CARDIO RESPIRATORY, GENERAL SURGERY, OBSTETRICS AND GYNAECOLOGICAL CONDITIONS	**2**	**1**	**0**	**3**	**3**
5	PHT242C811	PHYSIOTHERAPY IN SPORTS INJURIES LAB	**0**	**0**	**2**	**2**	**4**
6	PHT242C812	PHYSIOTHERAPY IN GENERAL SURGERY, OBSTETRICS AND GYNAECOLOGY LAB	**0**	**0**	**2**	**2**	**4**

7	PHT242C813	PHYSIOTHERAPY IN CARDIO RESPIRATORY CONDITIONS LAB	**0**	**0**	**2**	**2**	**4**
8	PHT242C814	CLINICAL EDUCATION-IV	**0**	**0**	**2**	**2**	**4**
9	PHT242C821	RESEARCH PROJECT	**0**	**0**	**2**	**2**	**4**
ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)							
10	CEN982A801	COMMUNICATIVE ENGLISH-VIII	1	0	0	1	1
ABILITY ENHANCEMENT ELECTIVE COURSES (AEEC)							
DISCIPLINE SPECIFIC-DSE (ANY TWO)							
11	PHT242D801	OCCUPATIONAL THERAPY	4	1	0	5	5
12	PHT242D802	YOGA & NATUROPATHY	4	1	0	5	5
13	PHT242D803	PSYCHIATRY	4	1	0	5	5
14	PHT242D804	COMMUNITY MEDICINE	4	1	0	5	5
		TOTAL					

SYLLABUS (8thSemester)
PAPER I/NAME:CLINICAL REASONING, EVIDENCE BASED PHYSIOTHERAPY, ADMINISTRATION AND TEACHING SKILLSSUBJECT CODE: PHT242C801
SCHEME OF EVALUATION: (T) CREDIT UNIT-2 L-T-P-C:1-1-0-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of the course are to introduce students to acquire knowledge of evidence based physiotherapy practice. Students will also be able to understand about administration and teaching skills.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	After completion of this course the students are expected to know about the evidence behind the choice of treatment given.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Introduction to Evidence Based Practice: Definitions, Evidence Based Physiotherapy Practice 2. Time management - career development in Physiotherapy.	20hours
2	1. Administration - principles-based on the Goal & functions - at large hospital set up/domiciliary services/private clinic /academic. 2. Methods of maintaining records	10 hours
3	1. Privacy and confidentiality o Definitions of 'privacy' and 'confidentiality' with reason in physiotherapy o Justified breaches of confidentiality- • Sharing information for patient care • Using interpreters • Teaching medical students • Mandatory reporting Serious danger to others • Patient or guardian consent 2. Equality, justice and equity o Definitions of 'equality', 'justice' and 'equity' o The right to health care & Physiotherapy o Disparities in health status o Roles of Physiotherapists in establishing health care priorities and allocating scarce health care resources as direct health care providers.	15 hours
4	1. Non-discrimination and non-stigmatization: What is discrimination and stigmatization? 2.Respect for cultural diversity and pluralism o Definition of culture and cultural diversity o Definition and value of pluralism o Limits to the consideration for cultural specificities Human dignity, human rights and fundamental freedoms	15 hours

Textbooks:

1.Practical evidence based Physiotherapy by Robert Herbert

Reference Books:

1. Electrotherapy : evidence based physiotherapy

SYLLABUS (8th Semester)		
PAPER II/NAME:PHYSIOTHERAPY IN SPORTS INJURIES		
SUBJECT CODE: PHT242C802		
SCHEME OF EVALUATION: (T)	CREDIT UNIT-3	L-T-P-C:2-1-0-3

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of the course are to introduce students to acquire knowledge of the various sports injuries and allow physiotherapist to rehabilitate the various sports injuries.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course the student is expected to know about various sports injuries and methods to deal with the injuries.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	1. Electrotherapy in sports injuries 2. Training the aerobic and anaerobic energy system 3. Physiological responses, changes & adaptations to various exercises - aerobic exercises & anaerobic exercises in Pulmonary, Cardiovascular, Neuromuscular system, Hormones	20hours
2	1. Detraining effects of cardiovascular, musculoskeletal and nervous system 2. Sports specific training and cross training. 3. **Various Body measurements:** Gross size and mass, length and height measurement, circumference of body parts, Skinfold thickness measurements	10 hours
3	**Musculoskeletal injuries** □ Pre–participation examination □ Causes & Mechanism of Sports Injuries, prevention of sports injuries to various structures. □ Common acute, chronic and overuse injuries in various sports at: • Shoulder girdle, Shoulder, Arm, Elbow, Forearm, Wrist & hand • Pelvis, hip, thigh, knee, leg, ankle & foot • Spine and Head • Thorax and Abdomen • Peripheral nerve injuries, injuries to muscles, ligament, tendon, bone, synovial joint structure(with physiological response to injury)	15 hours
4	**Cardiopulmonary** □Sporting emergencies & first aid □ Cardio pulmonary Resuscitation; Shock management, Internal and External bleeding, Splinting, Stretcher use–Handling and transfer, Management of Cardiac arrest, Acute asthma, epilepsy, drowning, burn, Medical management of mass participation. Heat stroke and Heat illness. **Body composition** □ Different Body composition Various methods to estimate body composition : water displacement method, under water weighing method, skinfold method, surface anthropometry, bioelectrical impedence analysis, ultrasound assessment of fat, arm X-ray assessment of fat, CT assessment of fat	15 hours

Text Book:

1. Sports Physiotherapy by Maria Zuluga

2. Sport and physical therapy – Bernhardt Donna, Churchill Livingstone, London 1995.

3. Bird, S. R., Black, N. Sports Injuries: Causes, Diagnosis, Treatment and Prevention. Cheltenham: Stanley Thomes, 1997.

Reference Books :

1. Brownstein, B. Functional movement in Orthopaedic and Sports Physical Therapy: Evaluation, Treatment and Outcomes.New York; London: Churchill Livingstone, 1997

2. Cash, M. Sport and Remedial Massage Therapy.London: Edbury, 1996

SYLLABUS (8th Semester)
PAPER NAME: PHYSIOTHERAPY IN CARDIO RESPIRATORY, GENERAL SURGERY, OBSTETRICS AND GYNAECOLOGICAL CONDITIONS SUBJECT CODE: PHT242C803 SCHEME OF EVALUATION: (T) CREDIT UNIT-3 L-T-P-C:2-1-0-3

Course Objective	**Teaching Learning Process**	**Learning Outcome**	**Course Evaluation**

The objectives of the course are to introduce students to acquire knowledge about surgical conditions. The course will also allow the students to understand and manage obstretical and gynaecological problems and cardiovascular and respiratory conditions. They will be able to practice application different cardiac and pulmonary rehabilitation tool in human body .	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course students will be expected to gain knowledge regarding various surgical procedure and the post operative care after the surgery. They will also gain knowledge regarding various issues related to the cardiovascular and respiratory system. They will also learn techniques to deal with the problem.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
1	**Section-1** Thoracic Surgery Review of pathological changes and principles of pre and post-operative management by physiotherapy of the following conditions:- 1. Lobectomy, Pneumonectomy, Thoracotomoy, thoracoplasty, Endoscopy & eye hole surgeries. 2. Corrective surgeries of congenital heart defects, angioplasties, blood vessel grafting, open heart surgeries & heart transplant. **Section –II** General, Gyanaeocology and Obsteries and ENT 1. Common abdominal surgeries, including GIT, liver, spleen, kidney, bladder etc. 2. Common operation of reproductive system, including surgical intervention for child delivery. Ante natal &post natal, physiotherapy. 3. Common operations of the ear, nose, throat & jaw as related to physiotherapy. 4. Common organ transplant surgeries- heart, liver, bone marrow etc.	20hours
2	**Sections- III** Wounds, Burns &Plastic surgery Review of pathological changes and principle of pre and post-operative management by physiotherapy of the following conditions: 1. Wounds, ulcers, pressure sores. 2. Burns & their complications.	10 hours

	3. Common reconstructive surgical proceeding of the management of wounds, ulcers, burns & consequent contractures & deformities. **Section IV** Neurosurgery Review of pathological changes and principle of pre and post-operative management by physiotherapy of the following conditions: 1. Common surgeries of the cranium & brain. 2. Common surgeries of vertebral column & spinal cord. 3. Common surgeries of peripheral nerves. 4. Surgical interventions in traumatic head injuries.	
3	1. Assessment of Cardio-Vascular and Respiratory system. 2. Anatomical and Physiological differences between the Adult and Paediatric lungs 3. Interpretation of radiological & Biochemical Investigations & correlate the same with clinical findings. 4. Functional diagnosis of cardio respiratory dysfunction (ECG, PFT, serum enzymes, ABG, ABI) 5. Physiotherapy techniques to increase lung volume □ Positioning and Mobilization □ Breathing exercises □ Neurophysiological Facilitation of Respiration □ Mechanical aids –Incentive Spirometry, CPAP, IPPB 6.Physiotherapy techniques to decrease work of breathing □ Energy Conservation and Positioning □ Breathing re-education – Breathing control techniques □ Mechanical aids – IPPB, CPAP, BiPAP 7.Physiotherapy techniques to clear secretions □ Hydration, Humidification &Nebulisation, □ Mobilization and Breathing exercises □ Postural Drainage □ Manual techniques – Percussion, Vibration and Shaking, Rib Springing, □ ACBT, Autogenic Drainage □ Mechanical Aids – PEP, Flutter, Acapella, RC Cornet, IPPB □ Facilitation of Cough and Huff & Suctioning 8.Drug Therapy	15 hours
4	9.Patterns of Lung Disorders & their PT Management 10.Physiotherapy following Lung Surgeries 11.Pulmonary Rehabilitation 12. Oxygen therapy and Mechanical Ventilation 13. Physiotherapy management for cardiac disorders 14. Physiotherapy for Cardiac Surgeries (including Critical Cardiac Care) 15. Cardiac Rehabilitation 16. Cardio-pulmonary resuscitation	15 hours

Text Book:

- Clinical & Operative surgery by S. Das
- Text book of Gynecology – by Dutta – New Central Book Agency
- Text book of Obstetrics - by Dutta – New Central Book Agency
- Cash`s Text book for Physiotherapists in Chest, Heart & Vascular diseases- Jaypee bros. Publication
- Cash`s text book in General Medical & Surgical conditions for Physio therapists
- Chest Physical therapy &Pulmonary rehabilitation-by Donna Frownfilter
- Brompton`s hospital guide 5 Physical Rehabilitation - O'sullivan

Reference Books:

- Bailey & Love's short practice of Surgery-21st edn.
- Cardiopulmonary Physical therapy by Irwin Scott.
- Physiotherapy in respiratory care – Alexandra Hough

SYLLABUS (8th Semester)		
PAPER V/NAME:PHYSIOTHERAPY SPORTS INJURIES LAB		
SUBJECT CODE: PHT242C811		
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:2-1-0-3

Course Objective	Teaching	Learning Outcome	Course Evaluation

	Learning Process		
The objectives of the course are to introduce students to acquire knowledge of the assesment, evaluation and examination related to sports injuries .They will be able to learn various sports rehabilitation methodology.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	The objectives of the course are to introduce students to acquire knowledge of the assesment, evaluation and examination related to sports injuries .They will be able to learn various sports rehabilitation methodology.	● Continuous Evaluation: 15%-(Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

SUPERVISED CLINICAL TRAINING:

All the works should be properly documented, signed by the respective teacher in-charge of the subject, indexed in a separate file and should be submitted before the preliminary examination of the semester. It is the responsibility of the student to submit the file(s) to the teacher before the examination

Evaluation & treatment planning; its presentation & documentation of minimum ten cases in following:

 Evaluation of Physical Fitness:Assesement of strength,power, endurance (muscular & cardiac), VO_2max, flexibility, reaction time and pulmonary function.

 Assessment of lower limb complex: Pelvis, hip, thigh, knee, leg, ankle and foot

 Assessment of upper limb complex: Shoulder girdle, shoulder, arm, elbow, forearm, wrist and hand

 Taping

Text Book:

1. Sports Physiotherapy by Maria Zuluga

2. Sport and physical therapy – Bernhardt Donna, Churchill Livingstone, London 1995.

3. Bird, S. R., Black, N. Sports Injuries: Causes, Diagnosis, Treatment and Prevention. Cheltenham: Stanley Thomes, 1997.

Reference Books :

1. Brownstein, B. Functional movement in Orthopaedic and Sports Physical Therapy: Evaluation, Treatment and Outcomes.New York; London: Churchill Livingstone, 1997

2. Cash, M. Sport and Remedial Massage Therapy.London: Edbury, 1996.

SYLLABUS (8thSemester)
PAPER NAME: : PHYSIOTHERAPY IN CARDIO RESPIRATORY, GENERAL SURGERY, OBSTETRICS AND GYNAECOLOGICAL CONDITIONS LAB SUBJECT CODE: PHT242C812

SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
The objectives of the course are to introduce students to acquire knowledge of the asssement and analysis related to general surgical and gynaecological disorders. Students will acquire knowledge of all the practical tools used for cardiac and respiratory care. It will also enable the student to practice application in human body parts.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	On completion of this course students will be expected to gain knowledge regarding evaluation and treatment following various surgical procedures and are also expected to gain knowledge regarding various investigative and training skills used in cardiorespiratory disorders.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

MODULE	TOPICS & COURSE CONTENT	PERIODS
-	1. All the works should be properly documented, signed by the respective teacher in-charge of the subject, indexed in a separate file and should be submitted before the preliminary examination of the semester. It is the responsibility of the student to submit the file(s) to the teacher before the examination Evaluation & treatment planning; its presentation & documentation of minimum ten cases in following: □ General and Gynaecological surgery □ Thoracic Surgery □ Wounds, Burns &Plastic surgery □ Neurosurgery 2. Skill to palpate all pulses, rhythm, rate, volume & Heart rate/pulse rate discrepancy 3. Skill to assess B.P. at various sites, & its Physiological variation, & to assess Ankle- Brachial Index 4. Skill of exercise testing- a)6/12 min walk, b)symptom limited 5. Interpretation of :	40 hours

	a) tread mill & Ergo-cycle test findings b) ECG.-,I.H.D. & Blocks, c) Biochemical analysis-serum enzymes, C.P.K levels, L.D.H., S.G.O.T., S.G.P.T., Troponin T, Lipid profile, electrolyte balance d) Chest X-ray, e) P.F.T.-obstructive/ restrictive/reversibility, f) A.B.G. g) R.P.E.-Borge`s scale h) Quality of life questionnaires 6. ICU apparatus and equipments	

Text Book:

- Clinical & Operative surgery by S. Das
- Text book of Gynecology – by Dutta – New Central Book Agency
- Text book of Obstetrics - by Dutta – New Central Book Agency
- Under-graduate Surgery by Nan
- Cash`s Text book for Physiotherapists in Chest, Heart & Vascular diseases- Jaypee bros. Publication
- Cash`s text book in General Medical & Surgical conditions for Physio therapists
- Chest Physical therapy &Pulmonary rehabilitation-by Donna Frownfilter
- Brompton`s hospital guide 5 Physical Rehabilitation - O'sullivan

Reference Books:

- Cardiopulmonary Physical therapy by Irwin Scott.
- Physiotherapy in respiratory care – Alexandra Hough
- Bailey & Love's short practice of Surgery-21st edn

SYLLABUS (8th Semester)		
PAPER NAME:CLINICAL EDUCATION-IV	SUBJECT CODE: PHT242C813	
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-

2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati.	● Lecture ● Assignment ● Individual and Group Presentation ● Case Study ● Role Plays/ quiz	Students will be expected to learn to assess, evaluate, diagnose and manage different patients from different department, learn the expertise to frame exercise therapy and electrotherapy protocols.	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

Description:

Every enrolled student has to carry out clinical posting in various clinical establishment in and around Guwahati. In the clinical posting all the students will learn to to assess, evaluate, diagnose and manage different patients from different department. The students will learn the expertise to frame exercise therapy and electrotherapy protocols. The students will be enable to provide evidence based practice.

SYLLABUS (8th Semester)		
PAPER NAME:RESEARCH PROJECT	SUBJECT CODE: PHT242C821	
SCHEME OF EVALUATION: (P)	CREDIT UNIT-2	L-T-P-C:0-0-2-2

Course Objective	Teaching Learning Process	Learning Outcome	Course Evaluation
This course will train the student how to perform a research in any Physiotherapy field	● Individual and Group Presentation ● Case Study	Every candidate pursuing BPT degree course is required to carry out work on a selected research project under the guidance of a recognized postgraduate teacher. The result of such a work shall be submitted in the form of research project	● Continuous Evaluation: 15%- (Assignment, Class Test, Viva, Seminar, Quiz : Any Three) ● Mid- Term Examination: 10% ● Attendance: 5% ● End Term Examination: 70%

DETAILED SYLLABUS:

Every candidate shall submit to the Registrar (Academic) of the university in the prescribed proforma, a synopsis containing particulars of proposed research project work on or before the dates notified by the university. The research project is aimed to train an undergraduate student in research methods and techniques. Every candidate pursuing BPT degree course is required to carry out work on a selected research project under the guidance of a recognized postgraduate teacher. The result of such a work shall be submitted in the form of research project (in the eighth semester). Any change in the dissertation topic or guide should be informed to the authorities of this university for its approval. No change in the dissertation topic or guide shall be made after the approval of the Research & Recognition Committee of the university.