

2012

Certificate in Physiotherapy Technology



Post FSc One Year Modular Program leading to
Diploma/Associate Degree

Eligibility:

1. FSc Medical Technology
2. FSc Pre-Medical
3. FSc Pre-Engr with Matric (Science)
4. F.A with Matric (Science)

Keeping Alive, the Spirit of Life!



DEVELOPED IN COLLABORATION WITH

National Vocational & Technical Training Commission (NAVTTTC)
&
National Institute of Medical & Social Sciences (NIMSS)

Allied Health Sciences Board of Studies

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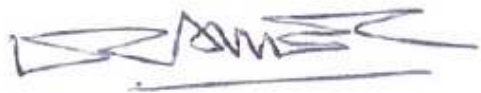
Preface

National Institute of Medical & Social Sciences (NIMSS) Islamabad is in process to provide state of art teaching in the field of medicine, dentistry, nursing, allied health sciences and post graduate studies. Considering the wide gap between the professional knowledge of the medics and the nurses/paramedics, it is deemed essential to commence paramedic technical courses. The College of Allied Health Sciences/NIMSS in collaboration with National Vocational & Technical Training Commission (NAVTTTC) intends to start one year certificate course (G-1) for Lab technicians, X-ray technicians and physiotherapists in February 2012. This is an exit program which desirably can be vertically integrated to the Second Year Diploma Program (G-2), onwards to Third Year Associate Degree (G-3) and finally to Fourth Year BSc Degree (G-4). The paramedics qualifying through these courses will meet the national as well as global demand for employment available both at the primary health care centers and tertiary health care centre.

The curricula have been designed to meet the international standards. It is based on credit hours with pivotal emphasis on acquiring competency based knowledge and skills, 60 % has been assigned to practicum being the major component of the curricula. Further, with advantage of the Institute of Online Learning (IOL) available to NIMSS, the distant learning for the theory interactive lectures has been designed. The students will be issued Laptops through which they will be able to learn/ acquire knowledge while at home. In addition, the practicum have been planned to be conducted close to the student's home. These curricula will facilitate the lesser privileged individuals to benefit from the program.

A team of experts representing Karachi, Quetta, Lahore and Islamabad were involved for the last three months. A group of specialist doctors and experienced technologists were involved in designing the curricula. In particular we would like to acknowledge the experts from the Liaquat National Hospital and Medical College Karachi, including Dr. Farah Deeba, Dr. Saad Saleem, Mr. Nasir Mansoor, Ms. Uzma Usman, Dr. Bushra Rehan and Dr. Jawaid Iqbal. Also intimately involved were Dr. Sheima Baig, Col. (Retd) Dr. Pervez Saleem Qureshi, Dr. Ahsen Farooq, Dr. Fauzia Zahid, Col. (Retd) Dr. Azra Javed, Mr. Qazi Habib, Ms. Sabeen Abid, Mr. Sanaullah Sanai and Mr. Jawad Akbar. We extend our gratitude to ED NAVTTC Mr. Tariq Shafi Chak and his team in particular Mr. Shahid Tarrar, Mr. Mohammad Nasir Khan and Ms. Rehana Tiwana, without their guidance and support the course may not have been a reality.

We welcome valid suggestions to add value to this endower.



Dr. Mian Amer Masud
CEO

Rationale

The purpose of this document is to introduce and implement structured training in physiotherapy with quality assurance. Subsequent to approval by the academic council of NIMSS, it will be forwarded to NAVTTC, after necessary authorization the curriculum will be formally inducted.

Program Description

The Physiotherapy program encompasses the performance and evaluation of scientific tests on body fluids. This is a dynamic profession that changes as new medical knowledge is discovered. Physiotherapy technician, have the technical expertise necessary to perform a wide variety of routine and specialized tests on patient. To do this, the physiotherapist uses the latest biomedical instruments, often interfaced with computers to generate accurate, reliable results. It is the goal of this course of study to equip the students with the necessary knowledge and skills to perform competently in a physiotherapy laboratory. Students who graduate from this program of study are also equipped to sit for the American Society of physiotherapy International certification examination for physiotherapy Technician.

Importance of the Problem

The qualitative challenge includes; the deterioration in maintaining requisite standards along with professional obligations. Quantitatively the magnitude of the problem is directly proportional to inadequate training and inappropriate attitude and inversely proportional to knowledge.

Educational goals

Overall - By the end of training trainees students will be able to perform adequate physiotherapy procedures properly with quality assurance.

Specifically the training will:

1. Provide the instructive and clinical experience necessary to acquire knowledge in physiotherapy subjects.

2. Ensure that, upon completion of the program, students are competent at the career entry level and have the knowledge and background to successfully prepare them for employment.
3. Inculcate a sense of duty and professionalism while interacting with patients, their relatives, colleagues and other health care providers.
4. Communicate effectively and professionally.
5. Prepare them for team work.
6. Impart sufficient technical knowledge to prepare them for employment.
7. Understand the significance of continuing education.
8. Impart professional honesty.

General Competencies

By the end of this program, the student should be able to:

- A. Demonstrate an understanding of the history of the Physiotherapy and the Professionalism desired in Physiotherapy personnel.
- B. Exhibit behavior consistent with the ethical practice of Physiotherapy.
- C. Maintain confidentiality of all patients.
- D. Demonstrate an appreciation for the special knowledge and talent of other members of the health care team.
- E. Evaluate quality control values and fulfill the requirements of national and international standards.
- F. Safely apply physiotherapy techniques according to established procedures.
- G. Perform techniques with accuracy and safety.

- H. Operate equipment, safely and according to established procedures, using only necessary supplies to maximize resources such as wax bath, hot packs, diathermy, infrared radiation, ultra sounds, stimulators, cryotherapy.
- I. Correctly demonstrate standard techniques, using only necessary tools to maximize resources.
- J. Exhibit an understanding of safety hazards in physiotherapy setup and demonstrate proper techniques to avoid accidents.
- K. Take vital signs and perform Point of care testing (POCT).
- L. Explain accreditation and certification.
- M. Identify and use basic medical terminology as it applies to physiotherapy setup.
- N. Use basic metric systems for procedures.

Skill levels

The skill level will be divided in to two; level I for initial six months and level II denotes competencies covered during second half of training.

Skill Level I

- Demonstrates proficiency in basic physiotherapy skills.
- Demonstrates knowledge of the essential components of equipment.
- Demonstrates competency in working with tools and equipment.
- Knows the procedure for incidence reporting of any untoward event like accidental electric shocks, pricks or injuries.

Skill Level II

- Be able to work independently.
- Demonstrates knowledge about physiotherapy tools, their application and contraindications.
- Demonstrates sufficient knowledge about patient care from reception to treatment including home care.
- Demonstrates quality control.
- Demonstrates knowledge of requirements pertaining to patient medical records.
- Demonstrates proficiency in handling and processing of infectious cases.
- Demonstrates full ability in disinfection, sterilization, waste management and incineration.
- Demonstrate computer data management.

Educational Strategies:

- On line Lecture
- On line Discussion
- Audio-Visual materials
- Demonstration
- Practicum
- Field Trips

Textbooks:

- Orthopedic Physical Assessment 5th Edition David J Magee ISBN #978-81-312-1514-2
- Clinically Oriented Anatomy by Keith Moore.
- Clinical Anatomy by R.J. Last, Latest Ed.
- Physiology by Berne and Levy, Latest Ed
- Clinical kinesiology and anatomy by Lynn S Lippert
- The principles of exercise therapy by: M Dena Gardiner, 4th Edition
- Exercise Physiology- Theory and Application to Fitness and Performance by: Scott K. Powers, Edward T. Howley.
- Exercise physiology, A thematic Approach By: Tudor Hale, University College Chichester, UK
- Additional study material as assigned by the tutor
- Manual Mobilization of the Joints The Kaltenborn Method of Joint Examination and Treatment Volume I The Extremities By: Freddy M. Kaltenbom in collaboration with Olaf Evjenth, TraudiBaldaufKaltenbom, Dennis Morgan, and Eileen Vollowitz ,OPTP Minneapolis, Minnesota, USA.
- Manual Therapy By: Ola Grimsby, the Ola Grimsby institute San Diego.
- Orthopaedic Manual Therapy Diagnosis Spine and Temporomandibular Joints By: Aad van der
- Neuromusculoskeletal Examination and Assessment A Handbook for Therapists By: Nicola J Petty, Ann P Moore & G D Maitland, Second Edition Churchill Livingstone
- Maitland's Vertebral Manipulation Seventh Edition By: Geoffrey D. Maitland
- Musculoskeletal manual medicine, diagnosis and treatment by JiriDovark, Vaclav Dovark, Werner Schneider etc

- Manual therapy, NAGS, SNAGS, MWMS etc by Brian R Mulligan fifth edition
- Hertling, D, and Kessler RM. Management of Common Musculoskeletal Disorders: Physical Therapy Principles and Methods. 3rd ed. Philadelphia, PA: WB Saunders 1995
- Therapeutics Exercises and Technique, By: Carolyn Kisner& Lynn Allen Colby 4th 5th edition.

Program Requirements, Examinations and Grading

Student Evaluation

1. Measurement

A- Formative:

- Quizzes after every lecture, 25%
- Discussion questions in chat room 25%
- Training assignments & Presentation 25%
- Tracking of Training by learning management system (LMS): 25%
Real Time onLine Tracking System

B- Summative:

- **Face to Face:** After each semester during face to face session written examinations will be given over lecture material and the accompanying laboratory exercises, and will comprehensively assess the student's knowledge of concepts, principles, techniques and procedures as related to the instructional material.
- **SCT:** Script Concordance Test to measure a student's progress in Problem Solving .The student will be required to explore internet and retrieve articles from professional journals.

2. Measurement of Practical work –

- OSCE: Objectively Structured Clinical Exams

Points are awarded for the successful completion of exercises as related to the specific objectives for each exercise through OSCE.

3. Peer & Self Assessment:

- Students Self Assessment form 50%
- Peer Assessment checklist 50%

4. Determination of Final Grade

a) 70 % of final grade

1. Formative Test: 70%
2. Summative Examination: 20%
3. Peer and self assessment: 10%

b) 30% of final grade

1. Completion of work OSCE
2. Two practical exams
3. Review of Safety Manual all exercises and study questions must be organized and turned In at end of the term, preferably in a binder or notebook, for validation by the Instructor.

Note:-

Incomplete assignments will receive grade "I". A student must have a passing average (70% or above) and have completed at least 80% of the course work.

Attendance Policy

Attendance is required at all times and arrival by the beginning of the class period is expected. Roll call will be taken at every class and practicum meeting. The student is required to notify an instructor if an absence is anticipated. If absences exceed 10 %, the student will be dropped from the course unless there are EXTREMELY extenuating circumstances. A student who is fifteen (15) minutes late is considered tardy. Three (3) tardies constitute one absence. It is the student's responsibility to keep track of his/her attendance record and all assignments, materials, examinations, etc., missed.

Failure or Dismissal from this Course Grading Scheme

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 59% and below

- A. A minimum grade of "D" (60%) is required in both the lecture and laboratory components of this course to remain on the program.
- B. Any student may be dropped from this course due to excessive absences and/or consistently failing to meet class assignments, for disruptive conduct during lecture or lab or for displaying conduct detrimental to the ethics of medical radiology practices.
- C. The instructors and lecturers understand that learning in group situations can be beneficial. However, each student is expected to demonstrate his/her own competency by doing his/her own work. Any student caught cheating in examinations, will be subject to disciplinary action, and possible withdrawal from the program.

Program Evaluation:

Research & Evaluation department will evaluate the program on the basis of student success rate and following feedbacks

A- Credit/ Contact hours:

Same as accepted internationally for face to face, on-line and Practicum

B- Student Evaluation:

Evaluation system is a confidential avenue for submitting honest, constructive feedback about the instructors and courses

- i- Trainer evaluation
- ii- Lecturer/Faculty evaluation
- iii- Course evaluation
- iv- PGY-1 Survey

C- Faculty Evaluation:

- i- Self assessment form
- ii- Peer Assessment checklist
- iii- Course evaluation

Special Physiotherapy Requirement

- A. All physiotherapy exercises **must** be read **before** attending the practical period.
- B. Safety Regulations of the physiotherapy equipment and tools must be observed:

JOB DESCRIPTION

Certificate in Physiotherapy Technology

1. Job Summary

To assist in providing standard physiotherapy by assessing, planning and implementing interventions under the supervision of registered physiotherapist.

2. Nature & Scope

Reports to (Please state designation Supervisor): or Registered Physiotherapist

3. Key Interactions

External: Patients, attendants and care givers.

Internal: Physiotherapists, Consultants, Nursing staff and other team members

4. Job specifications

Qualification & Experience Required:

Qualification: Certificate or Diploma after 12 years of science education (FSc)

Skills / Competencies

- Knowledge of the skills required in the assessment and treatment of all aspects of physiotherapy

Communicate effectively with all discipline involved in patient care

5. Functions of the Position

Regular Responsibilities:

- As a member of physiotherapy team assessing and providing services within a variety of settings /disciplines under the supervision of registered physiotherapist
- To undertake specific skilled support work to aid the rehabilitation of patients.
- To formulate physiotherapy treatment programs by using clinical reasoning and protocols under supervision of physiotherapist
- Work unsupervised reporting back patient progress and informing physiotherapist of any problems.
- To also be responsible for maintaining accurate record and progress of patients.
- Instruct patients and carers providing direction and guidance on a range of physical therapy and mobility activities, as part of own clinical work or as directed by the physiotherapist.
- To prepare and maintain apparatus and equipment identifying defects, hazards and equipment failure and notifying relevant manager.

Authorities:

- Work under supervision of physiotherapist or senior physiotherapist to assess, plan, implement, evaluate, and treat in a clinical diagnosis for individual patients to determine their need for physiotherapy intervention.
- If work independently on critical, crucial and indecisive issues clinically or managerially take advice from physiotherapist or supervisor

- At working time if feel any hazard of exercise or machine then has to inform supervisor.

6. Key Performance Indicators

- Punctuality.
- Knowledge/Clinical skills.
- Behavior/Attitude.
- Relationship with colleagues

Contraindications of Physiotherapy

TO CONTINOUS OR PULSED ULTRASOUND (Evidence based medicine)

Pregnancy, Malignancy, Infected Tissue under Pressure (Abscess), Implanted Pace Makers or Other Electronic Devices, Tuberculosis Lesions, Myositis, Ossificance, Inflamed Tissue, Bleeding Tissue, Radiation Tissue, Impaired Sensation Anterior Neck Over Carotid Region Over Spine Above L2. Spina Bifida, Eyes, Genitals.

GENERAL MEDICAL CONDITIONS

Unstable patients which have not been assessed by Physician

MI, Spinal Fx, and injuries, Bleeding disorders, unstable stroke, thrombosis

Course Outline

Duration: 1 Year

Course #	Subject
Orientation	
OC-1	Basic Computer Skill
OC-2	English
OC-3	Ethics

Semester I

Code	Courses	Credit Hrs
HGC-011	Public Health Care System & First Aid	2(1-1)
HGC-012	Anatomy & Physiology	3(1-2)
HGC-013	Medical Terminology	3(1-2)
PTC-009.1	Kinesiology	4(2-2)
HGC-018	Applied Computer Skills I	3(1-2)
	Sub Total	15(6-9)
HGC-015	Islamic Studies	1(1-0)
HGC-017	English I	1(1-0)
	Total Credit Hrs	17(8-9)

Semester II

Codes	Courses	Credit Hrs
PTC-009	Physiotherapy techniques	6(2-4)
HGC-018	Applied Computer Skills II	2(0-2)
PTC-010	Applied Anatomy	4(1-3)
PTC-011	Applied Physiology	4(1-3)
	Sub Total	16(4-12)
HGC-017	English II	1(1-0)
	Total	17(5-12)
	Total Credits Hours of Semester I & II	34(13-21)

Percentage Theory = 32 % and Practicum =68 % (Excluding English & Islamic Studies)

- Note 1:**
- i. "OC" represents Orientation Courses and carries no weightage
 - ii. "HGC" represents courses as per approved syllabus for HEC
 - iii. "PTC" represents technical courses with following description:

Note 2: According to Higher Education Commission (HEC) rules of credit hrs 1 credit hr is equal to 1 hr of face to face session/lecture every week for 18 weeks. Therefore 1 credit hr is equal to 18 hrs of face to face session/lectures. For internet learning 1 credit hr is equal to 3 hrs of internet session which will include 1.3 hours of lecture and 1.7 hrs of reading material, presentation, chat room discussion, quizzes.

Theory = 1 Credit hr = 18 hrs of lecture

Practical = 1 Credit hr = 36 hrs of Practicum

SEMESTER - I

	(LU-2) Health Infrastructure	<ol style="list-style-type: none"> 1. Role of AHP at different levels of health delivery system 2. Organizational Organ gram of the health infrastructure 3. Steps to achieve the goal / slogan “Health for all by the Year 2020” 4. Leading health indicators 5. Programming of Needs impact based module 6. Regional Health Indicators 	<p>The job description of the AHP will be more specified and authentic health delivery system will be a door step.</p> <p>Awareness to disease with communication to the relevant department will be more specified.</p> <p>Engaging community leaders or interested peoples who would be involved in improving health.</p> <p>Maintain cohabitation among the provinces and districts.</p>	LMS	Online Class, White Board	He will be able to recognize health indicators effectively and reporting to the concerned authorities	Class	1 Hr	
	(LU-3) Environmental Factors affecting health in a community and occupational health safety	<ol style="list-style-type: none"> 1. Composition of a Healthy Environment 2. Air Pollution Categories as noises/ water/ factories/ mills etc 3. Different types of waste disposable outside and 	<p>Awareness to the public to utilize preventive measures to avoid hazards of environmental pollution, methods for the proper disposal of the waste, hazards in use of electronics / chemical material, precautionary</p>	LMS	Online Class, White Board	He will be able to guide people in safe disposal of the waste, he will be able to display charts on the methodology of waste disposal	Class	1 Hr	

		hospitals 4. Importance of ventilation 5. Hazards of over crowding 6. Airborne diseases both communicable and non communicable 7. Diseases related to occupation in factories	measures in factories, display of charts related to various disease hazards. Importance of precautionary measures to be taken for health safety.						
	(LU-4) An account of water bourn diseases along with different sources of water and the impurities	1. Natural sources of water 2. Artificial sources of water 3. Impurities of water 4. Purification of the water 5. Types of water bourn diseases with prophylactic measures 6. Importance of hand wash both and methodology in the hospitals and at home on WHO	Public awareness on hazard's of impure water. Methodology to purify water, this will help to evaluate the impact and control on health status.	LMS	Online Class, White Board	H will be able to demonstrate and also do himself in appropriate form of hand wash as recommended by WHO, will be able to control water bourn diseases by informing the people of methods related to water purification	Class	1 Hr	

		guidelines.							
	(LU-5) Waste Managem ent	<ol style="list-style-type: none"> 1. Introduction to the types of waste material 2. Introduction to different types of waste bourn diseases 3. Different methods of waste disposal and collection / transportation / recycling 4. Reuse of used medical materials in hospitals and nursing homes 5. Use of incinerators in the hospitals 6. Hazard's leading to the infectious diseases due to improper 	Improvement in the environmental hygiene leading to prevention of spread of Waste Bourne diseases, reutilization of waste after recycling in different forms, prevention of labor class from various health hazards related to working area, use of proper methodology for destroying the medical disposable material i.e syringes / gloves / Empty IV Fluids Bags / Urine Bags / Royal stubs etc	LMS	Online Class, White Board	Able to differentiate between infectious toxic and non toxic waste, he will be able to provisionally diagnose waste bourn diseases, he will be able to use proper methods to destroy medical waste material.	Class	2 Hrs	

		<p>waste disposal</p> <p>7. Precautionary measures to be taken by factories for waste disposal</p> <p>8. Precautionary measures to be taken by the laborer in factories and at construction sites</p>							
	(LU-6) Communicable and Non Communicable diseases	<ol style="list-style-type: none"> 1. Introduction to Communicable and Non Communicable Diseases 2. Difference between Communicable and Non Communicable Diseases 3. Types of 	The role of AHP is to aware the public of both communicable and non communicable diseases and to take precautionary measures at different levels and to educate the community for adopting measures to prevent from these diseases.	LMS	Online Class, White Board	He will be of the knowledge of both communicable and non communicable diseases and can give the guidelines to the community for the prevention from these diseases.	Class	3 Hrs	

		<p>Diseases / sources / routes</p> <p>4. Precautionary Measures</p> <p>5. Public awareness through proper communication by media / banners / posters/ workshops</p>							
	(LU-7) EPI (Expanded program of immunization)	<ol style="list-style-type: none"> 1. Definition of EPI 2. Epidemiological Importance of EPI 3. Types of EPI as per lay down policy of WHO 4. Diseases preventable through EPI 5. Advantages and Disadvantages of EPI 	AHP will be knowledgeable regarding the EPI program and will help in implementation by working as a leader, the successful EPI program will decrease infant / child / morbidity and mortality rate, prevention of epidemic and endemics, door to door service will be provided by	LMS	Online Class, White Board	EPI program will be very helpful to AHP in awareness to the community and its implementation through community leaders for a health society; he will be well equipped with the knowledge of various diseases preventable through EPI.	Class	2 Hrs	

		<ol style="list-style-type: none"> 6. Cold chain process with preservation of vaccine in a specified temperature 7. Role of EPI in prevention of pandemics / endemics/ epidemics 8. Display of Organogram in form of Chart at the working site for public awareness 9. Proper EPI cards format to be designed with proper registration 	maintaining the record, follow up of the infant child EPI will be maintained as per policy.			Schedule EPI Cards will add to public to awareness, the important role of EPI in prevention of endemic, epidemic and pandemic.			
	(LU-8) Family Planning and reproductive health	<ol style="list-style-type: none"> 1. Introduction of family planning 2. Needs and Assessment 3. Methods of family 	Overview of the public health commitment to vulnerable population including child care, aging, person with disabilities and socio	LMS	Online Class, White Board	He will know the basic advantages and needs of family planning, will guide the couples on reproductive	Class	2 Hrs	

		<p>4. planning</p> <p>Reproductive Health lessons in community groups</p> <p>5. Pre marriage counseling in specified centers for family planning</p> <p>6. Importance of breast feeding in family planning</p> <p>7. Pre natal and post natal checkup to avoiding mishaps with proper booklet for follow up</p>	<p>economically disadvantaged population, it will decrease the morbidity and mortality in child birth leading to healthy mother and healthy child.</p>			<p>health by given the community lessons along with educating with family planning methods, pre marriage counseling will be helpful in reproductive health and importance of breast feeding family planning.</p>			
	(LU-9) Epidemiology	<p>1. Epidemiological Principles</p> <p>2. Terminology of Epidemiology</p>	<p>Epidemiological survey will impact on mortality and morbidity from</p>	LMS	Online Class, White Board	<p>He will be able to provide informative indicators of a</p>	Class	1 Hr	

		<ul style="list-style-type: none"> 3. Population Perspectives 4. Health Indicators 5. Public Health Surveillance 6. Types of Epidemiological Research 7. Vital Statistics 	<p>various acute chronic and physical disease condition which will be reflect the epidemiological and demographic transitions occurring in different areas in country, screening for early detection of diseases for social and medical management of diseases thus decreasing the mortality and morbidity rate, it will help in community orientation and the public health worker will be able to grasp and communicate the Epidemiology of a disease including rates, risk factors, disease determination, causation and public health surveillance</p>			<p>community reflecting the health care system which can further fill up the gap in the health care. The health indicator statistic will be based on demographic epidemiological surveys and data.</p>			
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	(LU-10) Public Health Worker Preparedness and Disaster Management	<ol style="list-style-type: none"> Essential role of public health worker in preparedness for and response to natural or terrorism related disasters Management of the casualties at site with evacuation to the hospital 	The AHP with the cooperation of the public and trained paramedics for First Aid will be able to manage the site and evacuate the casualties to the nearest secondary and tertiary care hospitals.	LMS	Online Class, White Board	He will be able to do the situational analysis and take necessary managerial measures in the event of disasters.	Class	2 Hrs	
	(LU-11) Primary Health Care	<ol style="list-style-type: none"> Role of Primary Health care in curative / preventive/ therapeutic / diagnostic areas History of primary health care and its important role The Eight 	A public health worker (AHP) following the roles of PHC will help in leadership/ epidemiological surveillance/ community participation/ disease prevalence. Role of communication in behavioral sciences, record of health indicators, population growth.	LMS	Online Class, White Board	The AHP will be able to implement the Eight Elements of primary health care at various level in a community in the light of need and assessment.	Class	2 Hrs	

		<p>Elements of PHC</p> <p>4. PHC as health informative and indicator of a country</p> <p>5. Health Education for methods and techniques in prevention and control of local endemic diseases and role of paramedics</p> <p>6. Formulary of the basic essential drugs (EDL) required as per WHO</p>							
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Assessment – Public Health

Learning Units	Theory Days / Hrs	Workplace Days / Hrs	Recommended Formative Assessment	Recommended Methodology	Scheduled Dates
Topics LU-1 to LU-11			<ol style="list-style-type: none"> 1. MCQS based on objectives <ol style="list-style-type: none"> a) True / False b) Fill in the blanks c) Choose the correct answer d) Modify the sentence 2. Short Assignments on topics 3. Maintenance of Log book 4. Maintenance of the record and graphic chart displayed in BHU / RHU 5. Inter sector knowledge of any endemic and epidemic through communication 6. Demonstration of <i>chlorinometry</i> of water in specified village with gastrointestinal disorders 	Audio Visual Presentation White board with Flip charts presentation s. Observatory Visits to BHU/RHU/MCH Visit to water filtration plants /dept. visit to incinerator for hospital waste disposal, visit to health care international agency and observe the health programs being conducted in specified areas under the supervision of foreign health agencies.	

MODULE 1-B

A PUBLIC HEALTH
 B FIRST AID – PRACTICUM 1 CR HR = 36 HRS

Modules	Learning Units (LU)	Topics	Learner's Desired Outcomes	Recommended Methodology	Practicum	Skill Developed	Work Place	Duration	Scheduled Dates
Module.1-A First Aid	(LU-1) Introduction to First Aid	9. Definition 10. Responsibilities 11. Policies / Protocols 12. Record 13. Referral 14. Assessment	Respondent action will be defined according to policy with proper referral and onsite First Aid Treatment	Audio / Visual Aids Presentations	Hands on	Will be versed with meaning of first aid in medical emergency handling and disposal	Training Site	1 Hr	
	(LU-2) Techniques and Equipments used in First Aid	7. Introduction to First Aid Equipments in Emergency 8. Use of the Equipments in proper way 9. Maintenance of the equipments	Use of the right equipment with proper method as per emergency reporting for First Aid i.e. causality handling	Audio / Visual Aids Presentations	Hands on	He will be able to identify and the importance of medical instruments as air way, vital signs, splints, bandages, cardiac	Training Site	2 Hrs	

						crash trolley			
	(LU-3) Types of First Aid Emergencies / Casualties / Reporting	<ol style="list-style-type: none"> 1. Introduction to all topics related to life saving procedures i.e. Breathing and Circulation / Resuscitation for adult and child / Choking summary charts for both adult and child 2. Importance of open airway for cardio respiratory maintenance 3. Handling of unconscious adult and child 4. Resuscitation chart for both adult and child 5. Choking due to foreign body etc for both adult and child 	The AHP will be able to differentiate and diagnose the type of causality reporting and with the assistance of the chart displace will provide the required treatment. He will be able to restore cardio pulmonary system and take necessary measure for referral to the tertiary care.	Audio / Visual Aids Presentations	Hands on	He will implement A.B.C on unconscious patient. Handling of an unconscious patient, treatment and handling of choking patient by hewer method.	Training Site	4 Hrs	

	(LU-4) Resuscitation (CPR)	7. Definition 8. Methods 9. CPR Techniques 10. Methodology of BLS / ALS 11. BLS through A.B.C 12. Vital Sign Monitoring 13. Cardiac crash trolley 14. Referral	Will be able to resuscitate in a sequence with monitoring of the vital signs in both digital method and manual. Will be able to utilized cardiac crash trolley, Will be able to sustain the cardio palmary system for referral to concerned department.	Audio / Visual Aids Presentations	Hands on	The AHP will be capable to position the patient and perform CPR in steps along with use of cardiac crash trolley and helping hands.	Training Site	4 Hrs	
	(LU-5) Circulatory System and Respiratory System	8. Brief Introduction to Hearth and Repertory System 9. Types of Emergencies related to Hearth and respiratory system 10. Cardiac Shock / Hearth failure / infarction etc	Will be able to Restore breathing / relieve pain and normalize the cardio pulmonary system with referral to specialist concerned.	Audio / Visual Aids Presentations	Hands on	He will be able to asses' patient head to toe examination and will follow the subject of S.A.M.P.	Training Site	4 Hrs	

		<ul style="list-style-type: none"> 11. Status asthmatics 12. Choking / Drowning / inhalation of Fumes etc 13. Head-to-toe Assessments steps in the format of S.A.M.P.L.E 				L.E. Immediate CPR will be performed to restore A.B.C to comply with the need of oxygen to the patient.			
	(LU-6) Wounds and Bleeding / Use of bandages	<ul style="list-style-type: none"> 1. Brief Hematology related to Human Anatomy 2. Bleeding Disorders and types of wounds 3. Mild and Severe Bleeding 4. Crush injuries 5. Cuts and Grazes 6. Abdominal and Vaginal bleeding 7. Management of Various types of bleeding sites 8. Different form of Bandages used at 	Control of bleeding site to minimize shock along with reassurance To patient and relatives, necessary arrangements in case of blood transfusion required call the concerned specialist for further management.	Audio / Visual Aids Presentations	Hands on	He will be skilled to use the type of bandages in accordance to the bleeding site, assessment of external and internal bleeding, application of	Training Site	3 Hrs	

		different sites and types of bleeding in accordance to severity of injury.				bleeding control sequence, use of pressure bandages.			
	(LU-7) Bone Joint and Muscle Injuries	8. Brief introduction to skeletal system 9. Various injuries to joints and bones 10. Dislocation of joints 11. Backache / sciatica 12. Types of springs 13. Methods of supporting the injured bone site 14. Splints / Bandages used for bone injuries 15. R.I.C.E and I.A.C.T methodology	Assessment of place and degree of injury, control of bleeding if any, minimize the shock by reassurance and analgesic will support the fractured sites by the use of splints and bandage for further treatment.	Audio / Visual Aids Presentations	Hands on	Assessment will be done and treatment will be based on R.I.C.E or I.A.C.T to the relative joint or born injury.	Training Site	3 Hrs	
	(LU-8) Nervous System Emergencies	1. Brief introduction to nervous system 2. Level of consciousness	Conscious level evaluation, clear airway, prevention of colonic / tonic convulsions,	Audio / Visual Aids Presentations	Hands on	He will be able to immediate stabilize	Training Site	3 Hrs	

		<ol style="list-style-type: none"> 3. Head injuries 4. Types of strokes 5. Seizures in adult and child 6. Systematic Diseases effecting CNS 7. Spinal injuries 8. Headache / migraine 9. Diseases of meningies 10. Management 	<p>checking of reflexes maintains air entry, assessment of neurological deficit. Handling of spinal injury with referral to specialist. IV infusion with monitoring of neurological sign and symptoms including level of consciousness / reflexes / ophthalmic reaction.</p>			<p>the patient with immobilization and clear airway along with treat shock with checking of the CNS system as a whole along with spinal injuries stabilization.</p>			
	(LU-9) Environmental injuries	<ol style="list-style-type: none"> 1. Brief anatomy of skin and vital areas 2. Types of burns and scalds 3. Electrical and Chemical Burns 4. Rule of 9 (Nine) to Determine the area of burn 	<p>Assessment of the degree of the environment injury, maintenance of body fluent and temperature, relief of pain, measures to relief the pain on the burn site by medication,</p>	Audio / Visual Aids Presentations	Hands on	Assessment of type and depth of bourn, immediate treatment of the shock by medicatio	Training Site	3 Hrs	

		<ol style="list-style-type: none"> 5. Fluid and Electrolyte Balance 6. CS Spray injuries 7. Frostbite / Hypothermia 8. Heat exhaustion / Heat Cramps / Heat Stroke 9. Sun burns 10. Prickly heat / body rash 				n, use of anti doubt in poisoning subject to availability, thermal injury patient to be removed from the site and referred for tertiary care.			
	(LU-10) Foreign Body Injuries	<ol style="list-style-type: none"> 1. Sensory Organs 2. Types of splinters 3. Site of injury 4. Inhaled foreign object 5. Swallowed foreign object 	Will be able to assess the status of foreign body injuries and to take measures to prevent further damage, possible removal of the foreign body with specialized instrumentation, control bleeding by maintaining I.V fluids	Audio / Visual Aids Presentations	Hands on	Care of the bleeding with use of antiseptic measures, removal of the foreign body if accessible ,avoid interferen	Training Site	3 Hrs	

						ce to major damage to avoid bleeding			
	(LU-11) Poisoning bites stings	<ol style="list-style-type: none"> 1. Types of various poises affecting the body system 2. Swelled poisons 3. Chemical / inhaled poisons 4. Insect bites / stings 5. Ticks / snake / animal bite 6. Rabies / Dog Bites 7. Use of various anti dotes 8. Drug reactions / poisoning 9. Chart to be maintained for treating effects of poisoning 	Assessment and Identification of piousness material, comforts and reassurance, recording of the vital signs, treatment of poison accordingly, drug poisoning / drug allergy to be highlighted and anti dote to be given accordingly, assurance of availability of drugs used to be present in emergency.	Audio / Visual Aids Presentations	Hands on	Reassurance to the patient, first aid care according to the type of poison inhaled, anti-dote to be given subject to availability, stabilize the patient and then refer.	Training Site	3 Hrs	
	(LU-12) Miscellaneous Emergency First Aid	First Aid in miscellaneous emergencies for management of fever/ headache / abdominal pain/	With brief introduction to miscellaneous emergency he will be able to provide first aid to relief the	Audio / Visual Aids Presentations	Hands on	He will be able to handle minor ailments reporting	Training Site	3 Hrs	

		vomiting / diarrhea/ allergy / vertigo etc	symptoms			in the medical health centre and will be knowledg eable to refer to the concerne d specialist as required.			
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Assessment – First Aid

Learning Units	Theory Days / Hrs	Workplace Days / Hrs	Recommended formative assessment	Recommended Methodology	Scheduled Dates
Topics LU-1 to LU-12			1. MCQS based on objectives e) True / False f) Fill in the blanks g) Choose the correct answer h) Modify the sentence 2. Identification of First Aid Equipments i.e Splints / Airways / Bandages / Fluids / Monitor 3. Short Assignments on Management of Various First Aid Procedures in reporting emergencies 4. Maintenance of Log book 5. Monitoring of cardio pulmonary vital signs 6. Steps of BLS / ALS 7. Steps on road traffic accident at site	Audio Visual Presentation	

HGC-012

Anatomy & Physiology

3(1-2)

Competencies

1. Understanding the structure of the human body and its regional and systemic organization.
2. Understanding the human body function at the cellular, tissue and system level.

Learning Objectives

- a. To understand the descriptive anatomical and physiological terms
- b. To describe anatomical regions, sections & planes.
- c. To introduce various systems of human body and their functions, including circulatory system, nervous system, digestive system, respiratory system, excretory system, gynecology and obstetrics and endocrinology.
- d. To introduce various sub-divisions of anatomy.
- e. To introduce osteology, orthology (joints), neurology, myology (muscles) and visceral anatomy.

**Distribution of Credit Hours HGC-012
(ANATOMY & PHYSIOLOGY)**

Credit Hours: 3(1+2) [Theory 1 credit hour = 18 hours and Practical 1 credit hour =36 Hours]

Theory: 18 hrs

Anatomy = 9 hrs

Physiology = 9 hrs

Practical: 72 hrs

Anatomy = 01 hr for 4 days/wk

Physiology = 01 hr for 4 days/wk

Summary

Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes/Objectives	Duration hours per week	Workplace ⁱ Days/hours	Recommended Methodology
Module I <u>Anatomy</u>	LU 1: Anatomy: Introduction to Anatomy	1. Definition and the sub-divisions of Anatomy 2. Anatomical and fundamental positions 3. The descriptive anatomical regions, sections, planes and basic terminologies	1. Understand the definition of the anatomy of human body. 2. Understand the different branches of Anatomy 3. Understand the anatomical and fundamental positions 4. Understand the regions, sections, planes, and basic terminologies.	2 Hours	Lab 1hrs/day	Multimedia Lectures
	LU 2: Anatomy: Osteology	1. Introduction to Skeleton and description of bone and cartilage. 2. Skeletal bones identification and structural details (upper and lower extremities)	1. Understand the different parts of skeleton, Cartilages, and bones 2. Understand, identify, give structural details, and demonstration of different bones of the human body (upper and lower extremities)	2 Hours	Lab 1hrs/day	Multimedia Lectures

	LU 3: Anatomy: Osteology and Arthrology	1. Skeletal bones identification and structural details of Skull, thorax, vertebral column, 2. Definition and classification of joints	1. Understand, identify, give structural details, and demonstration of skull, thorax and vertebral column 2. Understand the different types of joints of human body and structural details .	2 Hour	Lab 1hrs/day	Multimedia Lectures
	LU 4: Anatomy: Arthrology	1. Description of joints of upper limb with their anatomical structures 2. Description of joints of lower limb with their anatomical structures 3. Description of joints of spine with their anatomical structures	1. Understand and identify joints of upper limbs and learn their functions and movements. 2. Understand and identify joints of lower limb and learn their functions and movements. 3. Understand and identify joints of spine and learn their functions and movements.	3 Hours	Lab 1hrs/day	Multimedia Lectures

Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes/Objectives	Duration hours per week	Workplace ⁱⁱ Days/hours	Recommended Methodology
Module II Physiology)	LU 1: Physiology: 1. Introduction physiology (human body, cell, skin)	1. Introduction to physiology. Definition, structure and function of cell 2. Structure and function of Skin and temperature regulation of skin	1. Define physiology and understand the functioning of human body 2. Understand the functioning of the cell and types of cell 3. Understand the different layers of skin, their functioning, and its temperature regulation	2 Hours	Lab 1hrs/day	Multimedia Lectures
	LU 2: Physiology: Nervous System	1. Introduction to nervous system, neural cells and its divisions 2. Brief description of CNS, with structure and function of brain and Spinal Cord	1. Understand the different parts of nervous system, its cells and differentiate between neural cells and other human body cells 2. Understand and differentiate between CNS and PNS 3. Understand, identify, give structural details, and demonstration of CNS with brief functioning details of CNS	2 Hours	Lab 1hrs/day	Multimedia Lectures

	LU 3: Physiology: Nervous System	3. Brief description of PNS, with Cranial Nerves (names and functions), and Spinal Nerves [major nerves (names and functions)].	1. Understand, identify, give structural details, and demonstration of PNS with brief functioning details of PNS 2. Understand, identify, give structural details, and demonstration of cranial and spinal nerves 2. Understand and differentiate between CNS and PNS	2 Hours	Lab 1hrs/day	Multimedia Lectures
	LU 4: Physiology: Circulatory System	1. Introduction to Circulatory System 2. Structure and function of circulatory system 3. Heart rate and Blood pressure Regulation and Assessment of heart sounds 4. Composition and function of blood	1. Understand the functioning and structural details of the circulatory system including heart, arteries, veins, and capillaries 2. Understand the composition of blood and identify the different components blood, clotting factors, and their values 3. Differentiate and describe the heart rate, blood pressure, and heart sounds and describe their importance	3 Hours	Lab 1hrs/day for 4 days /wk for 18 wks	Multimedia Lectures

Lesson Plan

LU 1	Topic	Duration depends on previous knowledge	Learning outcomes After completing this topic, the learner should be able to:	Materials required NOTE: Participants should have their own workbooks and pens	Learning place	Skills
Anatomy: Introduction to Anatomy	1. Anatomical and fundamental positions 2. The descriptive anatomical regions, sections, planes and basic terminologies	2 lessons (2 hours)	1. Understand the anatomical and fundamental positions 2. Understand the regions, sections, planes, and basic terminologies.	1. Worksheets (depending on the previous knowledge of the students) 2. PowerPoint Presentations for illustrating different sections and planes 3. Anatomical Atlas for Demonstrations	Classroom/ anatomy lab	Able to assist movements in different planes

LU 2	Topic	Duration depends on previous knowledge	Learning outcomes After completing this topic, the learner should be able to:	Materials required NOTE: Participants should have their own workbooks and pens	Learning place	Skills
Anatomy: Osteology	1. Introduction to Skeleton and description of bone and cartilage. 2. Skeletal bones identification (upper and lower extremities)	3 lessons (3 hours)	1. Demonstrate the different parts of skeleton, Cartilages, and bones 2. Identify, give structural details, and demonstration of different bones of the limbs of human body.	1. Worksheets (depending on the previous knowledge of the students) 2. Anatomical Atlas for Demonstrations 3. Whole Human Skeleton and Separate Bones (single) for demonstrations	Anatomical Lab	Able to understand and explain the anatomical names of human skeleton (upper and lower extremities)

LU 3	Topic	Duration depends on previous knowledge	Learning outcomes After completing this topic, the learner should be able to:	Materials required NOTE: Participants should have their own workbooks and pens	Learning place	Skills
Anatomy: Osteology and Arthrology	1. Identification and structural details of head, neck and vertebral column. 2. Joints and its types	3 lessons (3 hours)	1. Identify, give structural details, and demonstration of different bones of the head and spine and their structural details. 2. Identify the major structures of joint and its components.	1. Worksheets (depending on the previous knowledge of the students) 2. Anatomical Atlas for Demonstrations 3. Whole Human Skeleton and Separate Bones and separate joints for Demonstrations.	Anatomical Lab	Able to understand and explain the anatomical names of human skeleton (head, neck, and vertebral column)

LU 4	Topic	Duration depends on previous knowledge	Learning outcomes After completing this topic, the learner should be able to:	Materials required NOTE: Participants should have their own workbooks and pens	Learning place	Skills
Anatomy: Arthrology	1. Description of joints of upper limb with their anatomical structures 2. Description of joints of lower limb with their anatomical structures 3. Description of joints of spine with their anatomical structures	5 lessons (5 hours)	1. Demonstrate the different joints of upper limb and their movements 2. Demonstrate the different joints of lower limb and their movements 3. Demonstrate the different joints of spine and its movements.	1. Worksheets (depending on the previous knowledge of the students) 2. Anatomical Atlas for Demonstrations 3. Whole Human Skeleton and Separate Bones and separate joints for demonstration. 3. Cadavers	1. Classroom 2. Anatomical Lab	Able to understand and explain the anatomical names of joints of human skeleton.

LU 1 and 2	Topic	Duration depends on previous knowledge	Learning outcomes After completing this topic, the learner should be able to:	Materials required NOTE: Participants should have their own workbooks and pens	Learning place	Skills
Physiology: Nervous System	1. Demonstration of structure of Brain and spinal cord 2. Demonstration of Cranial and Spinal Nerves (major nerves).	3lessons (3 hours)	1. Demonstrate and identify the different parts of brain and spinal cord 2. Identify different spinal nerves	1. Worksheets (depending on the previous knowledge of the students) 2. Anatomical Atlas for Demonstrations 3. Brain 4. Spinal Cord 5. Cadavers	1. Classroom 2. Anatomical Lab	Able to explain the parts and functions of brain and spinal cord with relation to nerves.

LU 3 and 4	Topic	Duration depends on previous knowledge	Learning outcomes After completing this topic, the learner should be able to:	Materials required NOTE: Participants should have their own workbooks and pens	Learning place	Skills
Physiology: Circulatory System	1. Structure circulatory system 2. Heart rate and Blood pressure monitoring and heart sounds	2 lessons (2 hours)	1. Demonstrate and identify the different parts of Heart 2. Demonstration of correct methods of measuring heart rate, blood pressure.	1. Worksheets (depending on the previous knowledge of the students) 2. Anatomical Atlas for Demonstrations 3. Cadavers 4. B.P. apparatus 5. Stethoscope	1. Anatomical Lab 2. Classroom.	Able to identify the structure of heart and explain and monitor the heart rate and blood pressure

Assessment

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled dates
Human Body And Disease (Anatomy / Physiology)	Module - I	Class	Examples	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every module
<u>Anatomy LU1 – LU4</u>	Module - I	Class	<p><u>MCQ'S:</u></p> <p>Q.1. Branches of Anatomy are:</p> <ol style="list-style-type: none"> a. Gross anatomy b. Clinical anatomy c. Embryology d. Surface anatomy <p>Q.2. Ankle joint :</p> <ol style="list-style-type: none"> a. Is a condylar type of synovial joint b. Deltoid ligament has superficial and deep parts c. Posterior tibiotalar is a deep part of deltoid ligament d. Supplied by deep peroneal and tibial nerves 	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every module

			<p>Q.3. Joint in which each joint surface is both convex in one plane & concave in other is:</p> <ol style="list-style-type: none"> Saddle joint Type of synovial joint Plane joint Ball & socket joint <p>Q.4. Bones of foot:</p> <ol style="list-style-type: none"> There are 7 tarsal bones Navicular bone is boat shaped Calcaneus form heel of bone There are 15 phalanges <p><u>BCQ'S</u></p> <p>Q.1. Anatomy is the study of:</p> <ol style="list-style-type: none"> Is a branch of biology and medicine and the study of internal functions of the human body Is a branch of biology and medicine that is the consideration of the structure of living things Is the study of bones and muscles of human body only Is the study of bones and joints of the human body 	
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			<p>Q.2. Frontal axis is an imaginary line around which rotation occur in _____ plane:</p> <ul style="list-style-type: none">a. Sagittal planeb. Coronal planec. Frontal planed. Transverse plane <p>Q.3. Which one is example of synovial hinge type of joint</p> <ul style="list-style-type: none">a. Symphysis pubisb. Sternoclavicularc. Elbowd. Radioulnar <p>Q.4. Anatomical snuff box.</p> <ul style="list-style-type: none">a. Is bonded anteriorly by tendon of extensor pollicislongus.b. Is bonded posteriorly by tendon of extensor pollicisbrevisc. Contain basili vein in roofd. Contain cephalic vein in roof.		
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Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended methodology	Scheduled dates
Human Body And Disease (Anatomy / Physiology)	Module - I	Class	Examples	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every module
<u>Physiology</u> <u>LU1 –LU4</u>	Module - I	Class	<p><u>MCQ'S;</u></p> <p>Q.1. Human Physiology</p> <ol style="list-style-type: none"> a. Is concerned with the specific characteristics and mechanisms of the human body that make it a living body b. Is the sub division of physiology c. Is to explain the physical and chemical factors that are responsible for the origin, development, and progression of human life d. Is confined to explain the mechanism is diseased conditions <p>Q.2. The cell</p> <ol style="list-style-type: none"> a. Membrane thickness is 7.5 to 10 nanometers b. Membrane is composed almost entirely of proteins and lipids c. Membrane contain cholesterol 	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every module

			<p>molecules only</p> <p>d. Membrane has lipid bilayer</p> <p>Q.3. Peripheral nervous system is basically classified into.</p> <p>a. Autonomic and sympathetic nervous system</p> <p>b. Somatic and autonomic nervous system.</p> <p>c. Sympathetic and parasympathetic nervous system.</p> <p>d. A and C both are true.</p> <p>Q.4. Following conditions are results in heat production:</p> <p>a. Heat production increases in response to decrease body temperature.</p> <p>b. Vasodilation of skin blood vessels.</p> <p>c. Thyroxine secretion.</p> <p>d. Vasoconstriction of skin blood vessels.</p> <p><u>BCQ'S:</u></p> <p>Q.1. Myelin sheet:</p> <p>a. Is a carbohydrate layer.</p> <p>b. Is only a lipid layer.</p> <p>c. Is only a protein layer.</p>		
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			<p>d. Acts as an insulator.</p> <p>Q.2. Two major parts of cell are</p> <ul style="list-style-type: none">a. Nucleus and cellb. Cell and cytoplasmc. Nucleus and cytoplasmd. Nucleus and cell membrane. <p>Q.3. All are the functions of blood except.</p> <ul style="list-style-type: none">a. Transportationb. Regulationc. protectiond. secretion <p>4. The process for the clearance of blood from the waste product is called:</p> <ul style="list-style-type: none">a. Filtration.b. Dialysis.c. Reabsorption.d. Secretion.		
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HGC-013 Medical Terminology 3(1-2)

Name of course: Medical terminology

Course Description: This course will provide students with a basic medical terminology vocabulary for use in the health care setting.

Course Objectives:

- Describe how medical terms are created.
- Use basic medical suffixes and prefixes accurately.
- Defines directional terms and anatomic planes of the body.
- Identify selected body systems structures and their related word parts.
- Use system word parts, prefixes, and suffixes to build and define words.
- Define medical terms related to selected diseases.
- Define selected diagnostic and surgical procedural terms for each body system.
- Define other selected medical terms and related to color and medical specialties.
- Recognize selected abbreviations related to each body system.
- Spell, pronounce, and use specific medical terms.

Competencies gained after completion of course:

This knowledge will enable them to become successful communicators (especially in the health care setting). Thru the course and semester projects students will learn ways to become active community members and life-long learners.

Summary

Module	Learning Units (LU)	Topics	Learners should be able to achieve these Outcomes	Theory Days/hours	Workplace Days/hours
Module 1 (First Semester)	LU 1 Building Medical Vocabulary	<ol style="list-style-type: none"> 1. Word building. 2. Word roots, combined Forms, Prefixes & Suffixes. 3. Combining word parts to write medical Terms. 4. Pronunciation of medical terms. 	<ul style="list-style-type: none"> • Identify the role and recognize example of word, roots, prefixes, suffixes & combining forms. • Demonstrate correct usage of the combining vowel. • Recognize the importance of spelling and correctly pronounce medical terms using phonetic system. 	2 Hr	4 Hr
	LU 2 The blood and other body fluids	<ol style="list-style-type: none"> 1. Body fluids and composition of blood 2. Abnormalities of the formed elements of blood. 3. Morphologic abnormalities of Erythrocytes. 4. Blood coagulation and Immune System. 5. Hemoglobinopathies and additional word parts. 	<ul style="list-style-type: none"> • Demonstrate the important role of body fluids. • Recognize the meaning of word parts and use them to write hematologic terms. • Describe several important processes and characteristics of blood. • Identify the function and principal conditions that effect erythrocytes, and blood platelets. • Accurately spell medical terms • Correctly pronounce medical terms. • Write the meanings of the abbreviations. 	2 Hr	4 Hr

	<p>LU 3 The Circulatory and Lymphatic System.</p>	<ol style="list-style-type: none"> 1. Cardio vascular pump and blood circulation. 2. Cardio vascular diagnostic procedure. 3. Lymphatic system. 	<ul style="list-style-type: none"> • Recognize the names of the structure of cardio vascular system and define terms. • Demonstrate understanding of the significance of the lymphatic system and analyze associated terminology. • Write the meaning of word parts associate with the circulatory system and use the word part to build and analyze terms. • Differentiate terms as being relate to diagnosis anatomy, surgery, therapy, or radiology. • Accurately spell the terms. • Correctly pronounce the terms. • Know the meaning of the abbreviations. 	<p>2 Hr</p>	<p>4 Hr</p>
	<p>LU 4 The Respiratory System</p>	<ol style="list-style-type: none"> 1. Respiration and its functions. 2. Composition of the Respiratory System 3. Respiratory diseases or disorders. 	<ul style="list-style-type: none"> • Recognize names of the structure of respiratory system and define terms associated with these structures. • Write the meaning of word parts associated with the respiratory system and use the word parts to build and analyze terms. • Differentiate terms as being related to the diagnosis anatomy, surgery, therapy, or radiology. • Correctly pronounce the term. • Know the meaning of the abbreviations. 	<p>1 Hr</p>	<p>2 Hr</p>

	LU 5 The Digestive System.	<ol style="list-style-type: none"> 1. Composition of the Digestive System. 2. Accessory organs of digestion. 	<ul style="list-style-type: none"> • Describe the structure and functions of the digestive system. • Recognize and define the meaning of the terms and use the word parts to write terms related to the digestive system. • Recognize the role of pancreas in diabetes mellitus and hypoglycemia. • Differentiate terms being related to diagnosis anatomy surgery, therapy, or radiology. • Accurately spell and pronounce the terms. 	1 Hr	2 Hr
	LU 6 The Urinary System	<ol style="list-style-type: none"> 1. The urinary tract and renal disorders. 2. Composition of Urinary System 3. Genito urinary infections and urinalysis. 	<ul style="list-style-type: none"> • Describe the structure and function of urinary tract. • Use the word parts to build and analyze terms related to urinary system. • Recognize the diagnostic importance of urinalysis. • Categorize the terms as an anatomical, surgical, diagnostic or radiological. • Accurately spell and pronounce the terms. • Know the meanings of the abbreviations. 	2 Hr	4 Hr
	LU 7 The Muscular and skeletal system	<ol style="list-style-type: none"> 1. Composition of bone. 2. The skeleton. 3. Joints. 4. Muscles and supporting structures. 	<ul style="list-style-type: none"> • Recognize the major bones of the body. • Describe the functions of bones, Muscle and supporting structures. • Use the word parts to build and analyze terms related to the skeletal and 	3 Hr	6 Hr

			<p>muscular system.</p> <ul style="list-style-type: none"> • Accurately spell and pronounce the terms. • Recognize the location of different types of vertebrae. 		
	LU 8 The Nervous System and Psychological disorder	<ol style="list-style-type: none"> 1. Composition of the Nervous System 2. The Central Nervous System. 3. The Peripheral Nervous System and the Sense Organs. 	<ul style="list-style-type: none"> • Describe the structure of the Nervous System and understand their relationship. • Use the word parts to build and analyze terms concerning the Nervous system. • Demonstrate the understanding of several disorders of the sense organs. • Accurately spell the terms. • Correctly pronounce the terms. • Know the meaning of the abbreviation. 	1 Hr	2 Hr
	LU 9 The Integumentary System	<ol style="list-style-type: none"> 1. Structure and function of the skin. 2. Associated skin structures. 3. Diagnostic, Pharmaceutical and therapeutic terms. 	<ul style="list-style-type: none"> • Demonstrate understanding of the structures and functions of the skin. • Write the meaning of word parts pertaining to the Integumentary system and use them to build and analyze Medical Terms. • Recognize the functions of structures associated with the skin. • Accurately spell the terms. • Correctly pronounce the terms. • Know the meaning of the abbreviations. 	1 Hr	2 Hr
	LU 10 The Endocrine System	<ol style="list-style-type: none"> 1. Composition of Endocrine System. 2. The Pituitary Gland. 3. Hormones released by 	<ul style="list-style-type: none"> • Understand the relationship between pituitary gland and other glands. • Identify the relationship of glands and 	1 Hr	2 Hr

		<p>the Neurohypophysis.</p> <p>4. The functions of the Adenohypophysis other endocrine tissues and Homeostasis.</p>	<p>target organs.</p> <ul style="list-style-type: none"> • Identify several disorders caused by hormonal • Write the meaning of word parts pertaining to the endocrine system and use them to build and analyze medical terms. • Accurately spell and pronounce the terms. • Know the meaning of Abbreviations. 		
	<p>LU 11 The Reproductive System</p>	<ol style="list-style-type: none"> 1. The female Genitalia. 2. The composition of Female Reproductive System. 3. Menstrual cycle and pregnancy. 4. Male Genitalia 5. The composition of male Reproductive System. 6. Sexually Transmitted diseases. 	<ul style="list-style-type: none"> • Describe the structure and function of female and male genitalia. • Use the word parts to build and analyze terms pertaining to the reproductive system. • Understand relationship between menstrual gents of cycle and pregnancy. • Describe several types of sexually transmitted diseases. • Know the causative agents of sexually transmitted disease and recognize the difficulty of treating those caused by viruses. • Accurately spell and pronounce the terms. • Know the meaning of abbreviation. 	2 Hr	4 Hr

Lesson Plan

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical (LMS)
LU 1 Building Medical Vocabulary	1. Word building.	1 lesson (60min) 20 min	<ul style="list-style-type: none"> Identify the role and recognize example of word, roots, prefixes, suffixes & combining forms. Demonstrate correct usage of the combining vowel. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
	2. Word roots, combined Forms, Prefixes & Suffixes.	40 min			
	1. Combining word parts to write medical Terms.	1 lesson (60min) 40 min	<ul style="list-style-type: none"> Demonstrate correct usage of the combining vowel. Recognize the importance of spelling and correctly pronounce medical terms using phonetic system. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
	2. Pronunciation of medical terms.	20 min			

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 2 The blood and other body fluids	1. Body fluids and composition of blood 2. Abnormalities of the formed elements of blood.	1 lesson (60min) 30 min 30 min	<ul style="list-style-type: none"> • Demonstrate the important role of body fluids. • Recognize the meaning of word parts and use them to write hematologic terms. • Describe several important processes and characteristics of blood. • Correctly pronounce medical terms. • Know the meaning of the abbreviations. 	1. White board. 2. A-V Display 3. Online presentation.	Online Exercises Online Presentation
	1. Morphologic abnormalities of Erythrocytes. 2. Blood coagulation and Immune System. 3. Hemoglobinopathies and additional word parts.	1 lesson (60min) 20 min 20 min 20 min	<ul style="list-style-type: none"> • Recognize the meaning of word parts pertaining to the various abnormalities of blood cell and use them to build and analyze medical terms. • Accurately spell medical terms • Correctly pronounce medical terms. • Know the meaning of the abbreviations. 		Online Exercises Online Presentation

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 3 The Circulatory and Lymphatic System.	1. Cardio vascular pump and blood circulation.	1 lesson (60min) 60 min	<ul style="list-style-type: none"> Recognize the names of the structure of cardio vascular system and define terms. Write the meaning of word parts associate with the circulatory system and use the word part to build and analyze terms. Differentiate terms as being relate to diagnosis anatomy, surgery, therapy, or radiology. Accurately spell the terms. Correctly pronounce the terms. Know the meaning of the abbreviations. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
	<ol style="list-style-type: none"> Cardio vascular diagnostic procedure. Lymphatic system. 	1 lesson (60min) 40 min 20 min	<ul style="list-style-type: none"> Demonstrate understanding of the significance of the lymphatic system and analyze associated terminology. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation

			<ul style="list-style-type: none"> • Differentiate terms as being relate to diagnosis anatomy, surgery, therapy, or radiology. • Accurately spell the terms. • Correctly pronounce the terms. • Know the meaning of the abbreviations. 		
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LU 4 The Respiratory System	<ol style="list-style-type: none"> 1. Respiration and its functions. 2. Composition of the Respiratory System 3. Respiratory diseases or disorders 	1 lesson (60min) 20 min 20 min 20 min	<ul style="list-style-type: none"> • Recognize names of the structure of respiratory system and define terms associated with these structures. • Write the meaning of word parts associated with the respiratory system and use the word parts to build and analyze terms. • Differentiate terms as being related to the diagnosis anatomy, surgery, therapy, or radiology. • Correctly pronounce the term. • Know the meaning of the abbreviations. 	<ol style="list-style-type: none"> 1. White board. 2. A-V Display 3. Online presentation. 	Online Exercises Online Presentation
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LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 5 The Digestive System.	<ol style="list-style-type: none"> 1. Composition of the Digestive System. 2. Accessory organs of digestion. 	<p>1 lesson (60min)</p> <p>30 min</p> <p>30 min</p>	<ul style="list-style-type: none"> • Describe the structure and functions of the digestive system. • Recognize and define the meaning of the terms and use the word parts to write terms related to the digestive system. • Recognize the role of pancreas in diabetes mellitus and hypoglycemia. • Differentiate terms being related to diagnosis anatomy surgery, therapy, or radiology. • Accurately spell and pronounce the terms. 	<ol style="list-style-type: none"> 1. White board. 2. A-V Display 3. Online presentation. 	<p>Online Exercises</p> <p>Online Presentation</p>

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 6 The Urinary System	<ol style="list-style-type: none"> Composition of Urinary System The urinary tract and renal disorders. 	1 lesson (60min) 30 min 30 min	<ul style="list-style-type: none"> Describe the structure and function of urinary tract. Use the word parts to build and analyze terms related to urinary system. Categorize the terms as an anatomical, surgical, diagnostic or radiological. Accurately spell and pronounce the terms. Know the meanings of the abbreviations. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
	<ol style="list-style-type: none"> Genito urinary infections and urinalysis. 	1 lesson (60min) 60 min	<ul style="list-style-type: none"> Recognize the diagnostic importance of urinalysis. Categorize the terms as an anatomical, surgical, diagnostic or radiological. Accurately spell and pronounce the terms. Know the meanings of the abbreviations. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 7 The Muscular and skeletal system	1. Composition of bone. 2. Joints.	1 lesson (60min) 30 min 30 min	<ul style="list-style-type: none"> Recognize the major bones and joints of the body. Describe the functions of bones and joints. Use the word parts to build and analyze terms related to the skeletal and muscular system. Accurately spell and pronounce the terms. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
	1. The skeleton.	1 lesson (60min) 60 min	<ul style="list-style-type: none"> Use the word parts to build and analyze terms related to the skeleton system. Recognize the location of different types of vertebrae. Use the word parts to build and analyze terms related to the skeletal and muscular system. Accurately spell and pronounce the terms. Recognize the location of different types of vertebrae. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
		1 lesson (60min)	<ul style="list-style-type: none"> Use the word parts to 	<ol style="list-style-type: none"> White board. 	Online

	1. Muscles and supporting structures.	60 min	<p>build and analyze terms related to the muscular system.</p> <ul style="list-style-type: none"> • Use the word parts to build and analyze terms related to the skeletal and muscular system. • Accurately spell and pronounce the terms. • Recognize the location of different types of vertebrae 	<ol style="list-style-type: none"> 2. A-V Display 3. Online presentation. 	Exercises Online Presentation
LU 8 The Nervous System and Psychological disorder	<ol style="list-style-type: none"> 1. Composition of the Nervous System 2. The Central Nervous System. 3. The Peripheral Nervous System and the Sense Organs. 	<p>1 lesson (60min)</p> <p>20 min</p> <p>20 min</p> <p>20 min</p>	<ul style="list-style-type: none"> • Describe the structure of the Nervous System and understand their relationship. • Use the word parts to build and analyze terms concerning the Nervous system. • Demonstrate the understanding of several disorders of the sense organs. • Accurately spell the terms. • Correctly pronounce the terms. • Know the meaning of the abbreviation. 	<ol style="list-style-type: none"> 1. White board. 2. A-V Display 3. Online presentation. 	Online Exercises Online Presentation

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 9 The Integumentary System	<ol style="list-style-type: none"> 1. Structure and function of the skin. 2. Associated skin structures. 3. Diagnostic, Pharmaceutical and therapeutic terms. 	<p>1 lesson (60min)</p> <p>20 min</p> <p>20 min</p> <p>20 min</p>	<ul style="list-style-type: none"> • Demonstrate understanding of the structures and functions of the skin. • Write the meaning of word parts pertaining to the Integumentary system and use them to build and analyze Medical Terms. • Recognize the functions of structures associated with the skin. • Accurately spell the terms. • Correctly pronounce the terms. • Know the meaning of the abbreviations. 	<ol style="list-style-type: none"> 1. White board. 2. A-V Display 3. Online presentation. 	<p>Online Exercises</p> <p>Online Presentation</p>

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 10 The Endocrine System	<ol style="list-style-type: none"> 1. Composition of Endocrine System. 2. The Pituitary Gland. 3. Harmones released by the Neurohypophys is. 4. The functions of the Adenohypophy sis other endocrine tissues and Homeostasis. 	1 lesson (60min) 15 min 15 min 15 min 15 min	<ul style="list-style-type: none"> • Understand the relationship between pituitary gland and other glands. • Identify the relationship of glands and target organs. • Identify several disorders caused by hormonal • Write the meaning of word parts pertaining to the endocrine system and use them to build and analyze medical terms. • Accurately spell and pronounce the terms. • Know the meaning of Abbreviations. 	<ol style="list-style-type: none"> 1. White board. 2. A-V Display 3. Online presentation. 	Online Exercises Online Presentation

LU	Topic	Duration depends on previous Knowledge	Learning outcomes after completing this topic , the learner should be able to	Materials required NOTE: Participants should have their own workbooks and pens	Learning Place / Practical
LU 11 The Reproductive System	1. The female Genitalia.	1 lesson (60min) 20 min	<ul style="list-style-type: none"> Describe the structure and function of female genitalia. Use the word parts to build and analyze terms pertaining to the female reproductive system. Understand relationship between menstrual cycle and pregnancy. Accurately spell and pronounce the terms. Know the meaning of abbreviation. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
	2. The composition of Female Reproductive System.	20 min			
	3. Menstrual cycle and pregnancy.	20 min			
	1. Male Genitalia	1 lesson (60min) 20 min	<ul style="list-style-type: none"> Describe the structure and function of male genitalia. Use the word parts to build and analyze terms pertaining to the male reproductive system. Describe several types of sexually transmitted diseases. Know the causative agents of sexually transmitted disease and recognize the difficulty of treating those caused by viruses. Accurately spell and pronounce the terms. 	<ol style="list-style-type: none"> White board. A-V Display Online presentation. 	Online Exercises Online Presentation
	2. The composition of male Reproductive System.	20 min			
	3. Sexually Transmitted diseases.	20 min			

Assessment

Learning Units	Theory (hrs-days)	Workplace (days)	Recommended formative assessment	Recommended methodology	Scheduled Dates
M1-LU 1: Building Medical Vocabulary			1. A _____ is the main body of the word. a) Suffix b) Prefix c) Root 2. The combining form of cyst is _____. a. cyst/a b. cyst/e c. cyst/o	1. MCQs 2. Terminology review Exercises. 3. Online assessment exercises.	Week 1 & Week 2
M1-LU 2: The blood and other body fluids	3 hrs	IOL (3 days)	1. Hemophilia is _____. a. Deficiency of red blood cells. b. A blood disorder. c. Deficiency of white blood cells. 2. A blood clot that forms in a blood vessel in the heart is called _____. a. Thrombus. b. Isotope. c. Macrophage. 3. The one who studies cells is called _____. a. Psychologist b. Hematologist. c. Cytologist.	1. Label the Given Diagram. 2. Reinforcement exercise. 3. MCQs 4. Online Assessment Exercise.	Week 3 & Week 4

<p>M1-LU 3:</p> <p>The circulatory and lymphatic system.</p>	<p>4 Hrs</p>	<p>IOL</p>	<ol style="list-style-type: none"> 1. Give meaning of the following abbreviations ; <ol style="list-style-type: none"> i) C P R ----- ii) E C G ----- iii) M I ----- iv) S A ----- v) C T ----- 2. Match suffixes in the right column to their correct meaning: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">a. – atomy</td> <td style="width: 50%;">A. membrane</td> </tr> <tr> <td>b.—phobia</td> <td>B. swelling</td> </tr> <tr> <td>c.---edema</td> <td>C. artificial</td> </tr> <tr> <td>d.—meter</td> <td>Opening</td> </tr> <tr> <td>e,-- ium</td> <td>D. abnormal fear</td> </tr> <tr> <td></td> <td>E. instrument to Measure</td> </tr> </table> 3. True/False statements: <ol style="list-style-type: none"> i) Defibrillator is an instrument to cause fibrillation. T/F ii) A narrowing of the aorta or its orifice is called aortic stenosis. T/F iii) Lymphadenoma is an enlarged lymph node. T/F iv) A primary disease of the heart muscle is termed as cardiomyopathy. T/f 	a. – atomy	A. membrane	b.—phobia	B. swelling	c.---edema	C. artificial	d.—meter	Opening	e,-- ium	D. abnormal fear		E. instrument to Measure	<ol style="list-style-type: none"> 1. Internet assignment 2. Online assessment 3. MCQs 	<p>Week 5 & Week 6</p>
a. – atomy	A. membrane																
b.—phobia	B. swelling																
c.---edema	C. artificial																
d.—meter	Opening																
e,-- ium	D. abnormal fear																
	E. instrument to Measure																

<p>M1- LU 4: The Respiratory system</p>	<p>3 Hrs</p>	<p>IOL</p>	<p>1) Match the following structures with their functions:</p> <p>1.pharynx A. Communicat ion with paranasal sinus</p> <p>2.alveoli B. contains vocal cords.</p> <p>3.nose C. where blood picks up oxygen.</p> <p>4.bronchus D. where tonsils are located.</p> <p>5.larynx E. one of the two branches of trachea.</p> <p>2) Give meanings of the following suffixes :</p> <p>a) algia -----</p> <p>b) capnia -----</p> <p>c) centesis -----</p> <p>d) ectasia -----</p> <p>e) iasis -----</p> <p>3) Give one answer for each of the following MCQs:</p> <p>a) Air or gas in the pleural cavity is -- -----.</p> <p>i) Pneumothorax</p> <p>ii) Pleuropneumonia</p>	<p>1. MCQs</p> <p>2. Label the given diagram.</p> <p>3. Internet presentation.</p>	<p>Week 7</p>
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			iii) pulmonary edema		
M1-LU5: Digestive System	3 Hrs	IOL	<p>1. Complete the table by writing a word part or its meaning in each blank :</p> <p>1. Suffix meaning</p> <p>1. cele -----</p> <p>2. clysis -----</p> <p>3. megaly -----</p> <p>4. ----- digestion</p> <p>5. ----- bad</p> <p>2) Select one correct answer for each of the following MCQs:</p> <p>1. Loss of appetite for food is called -----.</p> <p>i. Euphoria</p> <p>ii. Dyspepsia</p> <p>iii. Dysphagia</p> <p>2. Stomatitis is the inflammation of -----.</p> <p>i. Stomach</p> <p>ii. Intestines</p> <p>iii. Mouth</p> <p>3. Enteral means pertaining to -----</p> <p>i. Digestive tract</p> <p>ii. Stomach</p> <p>iii. Intestines</p> <p>4. Polydipsia is -----</p>	<p>2) Review exercise</p> <p>3) Internet assignment</p>	Week 8

			<p>---</p> <p>i. greater than normal lipids</p> <p>ii. excessive vomiting</p> <p>iii. excessive thirst</p>		
M1-LU6: Urinary system			<p>1) Write words for:</p> <p>(i) Difficult urination -----</p> <p>(ii) without urine -----</p> <p>(iii)inflammation of bladder -----</p> <p>(iv).inflammation of urethra -----</p> <p>(v) ketones in urine -----</p> <p>2) complete the following words that begin with intra- ;</p> <p>a) within the cell is intra - -----</p> <p>b) within the vein is intra - -----</p> <p>c) within the chest is intra- -----</p> <p>d) within a lung is intra- -----.</p>	<p>1. MCQs</p> <p>2. Terminology review exercise</p> <p>3. Label the given diagram.</p> <p>4. Online assessment.</p>	<p>Week 9 & Week 10</p>

<p>M1-LU7:</p> <p>The muscular and skeletal system.</p>			<p>1) Match the column ;</p> <p>1.ab----- a. Change or next</p> <p>2.infra---- b. joined; together</p> <p>3.supra---- c. backward</p> <p>4.retro---- d. situated below</p> <p>5.syn----- e. away</p> <p>6.meta---- f. above</p> <p>2) Give words for ;</p> <p>a) joint inflammation -----</p> <p>b) any disease of muscle -----</p> <p>c) Formation of bone -----</p> <p>d) muscle hernia -----</p> <p>3) choose one answer for each of the MCQs;</p> <p>A. abnormal hardness or heaviness of bones is -----.</p> <p>i) Osteopenia</p> <p>ii) osteosclerosis</p> <p>iii) osteoid</p> <p>B. lateral curvature of the vertebral column is called -----</p> <p>i) pagot's disease</p> <p>ii) scoliosis</p> <p>iii) osteoid</p>	<p>1. MCQs</p> <p>2. Working practice review exercises.</p> <p>3. Label the given diagram.</p> <p>4. Online assessment exercises.</p> <p>5. Terminology review exercises.</p>	<p>Week 11 & Week 12</p>
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<p>M1-LU8:</p> <p>The Nervous System and Psychological disorders</p>			<p>1. Match prefixes with their meanings;</p> <table border="1" data-bbox="863 272 1268 415"> <tr> <td>1.di-</td> <td>1. Against</td> </tr> <tr> <td>2. Hemi-</td> <td>2. Two</td> </tr> <tr> <td>3. inter-</td> <td>3. Half</td> </tr> <tr> <td>4. Contra-</td> <td>4. Between</td> </tr> </table> <p>2) True/False statement ;</p> <p>a) the Gray matter that covers the cerebrum is called cerebral cortex. T/ F</p> <p>b) Paralysis of one side of body is called hemiplegia. T/F</p> <p>c) Pain of many nerve is called polyneuralgia . T/F</p>	1.di-	1. Against	2. Hemi-	2. Two	3. inter-	3. Half	4. Contra-	4. Between	<p>1. MCQs</p> <p>2. Online assessment exercises.</p> <p>3. Terminology review exercises.</p>	<p>Week 14</p>
1.di-	1. Against												
2. Hemi-	2. Two												
3. inter-	3. Half												
4. Contra-	4. Between												

<p>M1-LU9:</p> <p>The Integumentary System</p>			<p>A. True and False Statement:</p> <p>i) Hidr/o means sweat. T/F</p> <p>ii) Heat stroke & Sun stroke are examples of hypothermia. T/F</p> <p>iii) A partial or total absence of pigment in the skin, hair and eyes is called albinism. T/F</p> <p>B. Write the meaning of Following abbreviations:</p> <p>i) BX</p> <p>ii) SLE</p> <p>iii) UV</p> <p>iv) FANA</p> <p>C. Write the meaning of combining forms listed below:</p> <p>i) Albin/o-----</p>	<p>1. MCQs</p> <p>2. Online assessment exercises.</p> <p>3. Terminology review exercises.</p>	<p>Week 15</p>
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			ii) Lethy/o----- iii) Seb/o----- iv) Xer/o-----		
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M1-LU10: The Endocrine System			<p>A. Match glands with the harmonies they secrete.</p> <table border="1" data-bbox="821 448 1226 591"> <tr> <td>Thyroxin</td> <td>Pituitary</td> </tr> <tr> <td>Insulin</td> <td>Thyroid</td> </tr> <tr> <td>Growth harmonies</td> <td>pancreas</td> </tr> </table> <p>Choose one answer for each of the following MCQs.</p> <p>A. Which type of term is “mastectomy”?</p> <ul style="list-style-type: none"> i) Anatomical ii) Diagnostic iii) Radiological iv) Surgical <p>B. Enlargement of the adrenal gland is:</p> <ul style="list-style-type: none"> i) Adrenitis ii) Adenoma iii) Adrenomegaly iv) Adrenalectomy <p>C. Hormones that produce masculine sex characteristics are:</p> <ul style="list-style-type: none"> i) Androgens ii) Prolactins iii) Estrogens iv) Triiodothyronines 	Thyroxin	Pituitary	Insulin	Thyroid	Growth harmonies	pancreas	<ul style="list-style-type: none"> 1. Label the given Diagram. 2. Terminology review exercises. 3. Online assessment exercises. 	Week 16
Thyroxin	Pituitary										
Insulin	Thyroid										
Growth harmonies	pancreas										

<p>M1-LU11: The Reproductive System</p>			<p>A. Match prefixes with their meanings:</p> <p>Ante---- None Ecto----- Many Multi---- First Neo----- Before Nulli----- After Post----- Outside Primi----- new</p> <p>Choose one answer for each of the following MCQs.</p> <p>A. An infection involving more or less the entire female genital tract is: i) Oophoritis ii) Salpingitis iii) Pelvic inflammatory disease</p> <p>B. Another name for an extrauterine pregnancy is: i) Ectopic pregnancy ii) False pregnancy iii) Pseudocyesis</p> <p>Write the meaning of Following abbreviations:</p> <p>1. ARC----- 2. GU----- 3. IUD----- 4. LMP----- 5. PID-----</p>	<p>1. MCQs 2. Terminology review exercises. 3. Internet assignment. 4. Online assessment exercises.</p>	<p>Week 17 & Week 18</p>
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PTC-009.1

kinesiology

4(2-2)

Competencies

1. Understanding biomechanics of various joints and muscles, related body movements deformities and corrections

Learning Objectives

1. To introduce classification of body movements
2. To introduce and study effects of various breathing exercises, posture drainage
3. To introduce and study effects of suspension therapy
4. To introduce use and effects of pulley circuits
5. To introduce methods of promoting relaxation, effects and usage
6. To introduce gait training/ reeducation of walking
7. To introduce the physiotherapy treatment of clinical conditions of:
 - a. Nervous system
 - b. Muscles and Joints
 - c. Respiratory tract
 - d. Fracture and deformities

8. To introduce the physiotherapy treatment for:

- a. Pre and post operating care
- b. Chest surgery
- c. Traumatic conditions

9. Introduction to:

- a. hydro therapy
- b. Manual Therapy
- c. wax Therapy
- d. Exercise therapy
- e. Chest Physiotherapy
- f. Traction Therapy

Summary

Distribution of Credit Hours PTC-009.1

Credit Hours: 4(2-2) [Theory 1 credit hour = 18 hours and Practical 1 credit hour =36 Hours]

Per Module = [0.5credit for theory and 0.5 for practical]
9 Hours or 0.5 Credit Hours/module

Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace ⁱⁱⁱ Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module-I Kinesiology	LU 1: Introduction to kinesiology	1. Introduction to Kinesiology and Rehabilitation	1. Understand the definition of Kinesiology and rehabilitation 2. Understand the anatomy of muscles,	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multimedia Lectures	1. Demonstration of muscle actions according to structure and function	4 Hours	1. Able to perform muscle actions according to structure and function

		<p>2. Introduction to Composition of muscles and Mechanism of Muscle Contraction</p> <p>3. Introduction to Muscle tone and Muscle Action</p> <p>4. Classification of</p>	<p>functioning of muscles and composition of muscles</p> <p>3. Understand the anatomical and fundamental concepts of muscle contraction and its types according to structure and function.</p>						
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		Muscles according to Architecture, Shape, function and according to their Clinical Application							
	LU 2: Mechanics of position and movement	1. Introduction to movement in Axes' and Planes with Anatomical and Physiologic	1. Understand the movements in regions, sections, and planes. 2. Understand, identify, give details, and demonstration of different fundamental and derived positions.	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multimedia Lectures	1.Demonstration of movements in different planes 2.Demonstrate fundamental positions and its derivation according to environment and condition	4 Hours	1.Able to assists movements in different planes 2. Able to define the different positions of human being

		al Application							
		2. Fundamenta l and Derived positions							
	LU 3: Descripti on of Moveme nts and its Principle s, Effects and uses	1. Classificatio n of Movement 2. Description of types of movements (Active/Pass ive)	1. Understand and demonstration of movements 2. Understand and identify the different types of movements and exercises.	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multime dia Lectures	1.Fundamentals of muscle testing 2. Methods of muscle recording 3. Basic muscle grading system	4 Hours	1. Able to assist muscle in different grades 2.Able to assist joint ranges in different angles 3. Able to perform different exercises

	LU 4: Posture and Gait	<p>1. Normal Posture and Gait</p> <p>2. Abnormal Posture and Gait</p>	<p>1. Understand and identify the normal body posture and identify the normal gait patterns of human body</p> <p>2. Understand and identify the abnormal body posture and identify the abnormal gait patterns of human body</p>	3 Hours	Class-rooms, 2 days a week, 1 and 2 hour lecture per day	Multimedia Lectures	1. Demonstrate normal and abnormal posture and gait	6 Hours	<p>1. Able to understand different postures</p> <p>2. Able to distinguish between different Gait patterns</p>
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Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace ^{iv} Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module II Kinesiology	LU 1: Shoulder Joint:	1. Biomechanics of the Shoulder 2. Normal examination	1. Define biomechanics of shoulder joint 2. Understand the different examination techniques of normal shoulder joint.	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multimedia Lectures	1. Demonstration and assessment of ranges of shoulder joint	4 Hours	1. Able to define shoulder joint and its movements
	LU 2: Shoulder Joint	1. Abnormal Examination 2. Therapeutic exercises	1. Understand the different examinations related to abnormalities of shoulder joint	2 Hours	Class-rooms, 2 days a week, 1 lecture per day	Multimedia Lectures	1. Demonstration, examination of abnormal ranges of shoulder joint	4 Hours	1. Able to define abnormalities of movement of shoulder joint

		of Shoulder Joint	2. Understand the therapeutic exercises of shoulder joint in different conditions				2.Demonstrate different types of exercises on shoulder joint		2. Able to perform or assist physiotherapist in providing exercises
	LU 3: Elbow Joint	1. Biomechanics of the Elbow 2. Normal examination 3. Abnormal examination 4. Therapeutic exercise	1. Define biomechanics of Elbow joint 2. Understand the different examination techniques of normal Elbow joint. 3. Understand the different examinations related to abnormalities of Elbow joint 4. Understand the therapeutic exercises of Elbow joint	2 Hours	Class-rooms, 2 days a week, 1 hour lecture	Multimedia Lectures	1.Demonstration, examination of normal and abnormal ranges of Elbow joint 2.Demonstrate different types of exercises on Elbow joint	4 Hours	1.Able to define elbow joint and its movements 2.Able to define abnormalities of movement of elbow joint 3.Able to perform or assist physiotherapist in providing exercises

	<p>LU 4: Wrist Joint and Hand</p>	<p>1. Biomechanics of the Wrist 2. Normal examination 3. Abnormal examination 4. Therapeutic exercise</p>	<p>1. Define biomechanics of Wrist joint 2. Understand the different examination techniques of normal Wrist joint and Hand 3. Understand the different examinations related to abnormalities of Wrist joint and Hand 4. Understand the therapeutic exercises of Wrist joint and Hand</p>	<p>3 Hours</p>	<p>Class-rooms, 2 days a week, 1 hour lecture</p>	<p>Multimedia Lectures</p>	<p>1. Demonstration, examination of normal and abnormal ranges of Wrist joint and Hand 2. Demonstrate different types of exercises on Wrist joint and Hand</p>	<p>6 Hours</p>	<p>1. Able to define Wrist joint and Hand and their movements 2. Able to define abnormalities of movement of Wrist joint and Hand 3. Able to perform or assist physiotherapist in providing exercises</p>
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Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace^y Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module-III Kinesiology	LU 1: Hip joint	1. Biomechanics of the Hip 2. Normal examination	1. Define biomechanics of Hip joint 2. Understand the different examination techniques of normal Hip joint.	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multimedia Lectures	1. Demonstration, examination of abnormal ranges of Hip joint	4 Hours	1. Able to define Hip joint and its movements
	LU 2: Hip joint	1. Abnormal Examination 2. Therapeutic	1. Understand the different examinations related to abnormalities of Hip joint	2 Hours	Class-rooms, 2 days a week, 1 lecture per	Multimedia Lectures	1. Demonstration, examination of abnormal ranges of Hip joint	4 Hours	2. Able to define abnormalities of movement of Hip joint

		c exercises	2. Understand the therapeutic exercises of Hip joint		day		2..Demonstrate different types of exercises on Hip joint		3.Able to perform or assist physiotherapist in providing exercises
	LU 3: knee joint	1. Biomechanics of the Knee 2. Normal examination	1. Define biomechanics of Knee joint 2. Understand the different examination techniques of Normal Knee joint.	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multimedia Lectures	1.Demonstration, examination of abnormal ranges of Knee joint	4 Hours	1.Able to define Knee joint and its movements
	LU 4: knee joint	1. Abnormal examination 2. Therapeutic	1. Understand the different examinations related to abnormalities of Knee joint	3 Hours	Class-rooms, 2 days a week, 1 and 2 hour lecture	Multimedia Lectures	1.Demonstration, examination of abnormal ranges of Knee joint	6 Hours	1..Able to define abnormalities of movement of Knee joint

		c exercise	2. Understand the therapeutic exercises of Knee joint		per day		2..Demonstrate different types of exercises on Knee joint		2. Able to perform or assist physiotherapist in providing exercises
Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace^{vi} Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module-IV Kinesiology	LU 1: Ankle Joint and Foot	1. Biomechanics of the Ankle 2. Normal examination	1. Define biomechanics of Ankle joint 2. Understand the different examination techniques of Normal Ankle joint.	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multimedia Lectures	1.Demonstration, examination of abnormal ranges of Ankle joint and Foot	4 Hours	1.Able to define Ankle joint and Foot and their movements

	<u>LU 2:</u> Ankle Joint and Foot	1. Abnormal Examination 2. Therapeutic exercises	1. Understand the different examinations related to abnormalities of Ankle joint and foot 2. Understand the therapeutic exercises of Ankle joint and foot	2 Hours	Class-rooms, 2 days a week, 1 lecture per day	Multimedia Lectures	1.Demonstration, examination of abnormal ranges of Ankle joint and Foot 2..Demonstrate different types of exercises on Ankle joint and Foot	4 Hours	1.Able to define abnormalities of movement of Ankle joint and Foot 2.Able to perform or assist physiotherapist in providing exercises
	<u>LU 3:</u> Spine	1. Biomechanics of the Spine 2. Normal examination	1. Define biomechanics of Spine joint 2. Understand the different examination techniques of Spine joint.	2 Hours	Class-rooms, 2 days a week, 1 hour lecture per day	Multimedia Lectures	1.Demonstration, examination of abnormal ranges of Spine	4 Hours	1.Able to define Spine and its movements

	LU 4: Spine	1. Abnormal examination 3. Therapeutic exercise	1. Understand the different examinations related to abnormalities of Spine joint 2. Understand the therapeutic exercises of Spine joint	3 Hours	Class-rooms, 2 days a week, 1 and 2 hour lecture per day	Multimedia Lectures	1. Demonstration, examination of abnormal ranges of Spine 2. Demonstrate different types of exercises on Spine	6 Hours	1. Able to define abnormalities of movement of Spine 2. Able to perform or assist physiotherapist in providing exercises
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Assessment

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended methodology	Scheduled dates
Kinesiology	Module - I	Class	Examples	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every Class/Module
<u>Kinesiology</u> <u>LU1 –LU4</u>	Module - I	Class	<p><u>MCQ'S;</u></p> <p>Q.1. Kinesiology is the study of:</p> <ul style="list-style-type: none"> e. Movement of human being f. Function of machines <p>Q.2. Ankle joint is a :</p> <ul style="list-style-type: none"> e. Hinge joint f. Synovial joint <p>Q.3. Frozen shoulder is</p> <ul style="list-style-type: none"> a. Stiff Shoulder b. structure of shoulder joint 	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every Class/Module

BCQ'S

Q.1. Frontal axis is an imaginary line around which rotation occur in _____ plane:

- e. Sagittal plane
- f. Coronal plane
- g. Frontal plane
- h. Transverse plane

Q.2. Movements on lumbar Spine is

- a. Flexion only
- b. Extension only
- c. Flexion and Extension only
- d. Flexion, Extension and Rotation

Q.3. Grading of muscles

- a. Grade 1-3
- b. Grade 1-4
- c. Grade 0-5
- d. Grade 1-5

HGC-018 Applied Computer Skills – I 3(1-2)

Name of course: HGC-08 Applied Computer Skills

Overall objective of course:

This survey course provides students with an overview of computer technology topics–Hardware, software, networking, Internet, data management, system design, ethical issues, mobile computing, programming, and careers in computer technology. It is designed as a first course for students pursuing a degree in the computer field

Competencies gained after completion of course:

This course will develop students’ knowledge of:

- Technical terminology related to computers, electronic communications, and applications software.
- Electronic systems, communications networks, and applications in use today.
- The societal impact of Information Systems.
- The functions of an operating system, including allocating system resources, and media and file management.
- Control structures and development issues associated with computer programming.
- Bibliographic resources to identify and synthesize current information.

Summary

Modules	Learning Units(LU)	Topics	Learner's desired outcomes	Recommended Methodology	Practicum	Skill developed	Work place	Duration	scheduled dates
Module 1: Introduction to computer Science	LU1	Introduction	Use correct terminology associated with information Technology Describe an Information System using examples from business, education, and personal use	Online Lecture. Multimedia presentation.		Students should be able to understand the importance of Information technology in Education	Online Class-rooms, Lab	1 Hr 1 Hr/Day For 4 Day/week	After every topic
	LU2	History of Computer Science 1. Abbacus 2. Generation Of Computers 3. Languages	Students able to know the brief history of information technology	Online Lecture. Multimedia presentation. Video Demonstration		Students should be able to understand the history and Background of Computer Science	Online Class-rooms Lab	1 Hr 1 Hr/Day For 4 Day/week	After every topic
Module 2: Introduction of Hardware	LU3	CPU and Memory	Define CPU in terms of manufacturer, model number, speed, maximum addressable RAM, and bus size	Online Lecture. Multimedia presentation. Video Demonstration	Activity: Students will prepare a research document on the	Students able to know structure of CPU and importance of Memory	Online Class-rooms Lab	2 Hr 1 Hr/Day For 4 Day/week	After every topic

					Importance of CPU.				
	LU4	Data storage device	Use correct terminology associated with information processing & Data storage	Online Lecture. Multimedia presentation. Video Demonstration	Activity: Students will work on Microsoft Access	Students able to understand the data processing and storage devices	Online Class-rooms Lab	1 Hr 1 Hr/Day For 4 Day/week	After every topic
	LU5	Input/output device	Compare input and output devices found with a variety of PCs – sub-notebooks, notebooks, laptops, desktops, and etc	Online Lecture. Multimedia presentation. Video Demonstration	Activity: Students will gather the list of I/O devices	Students able to understand the input and output devices	Online Class-rooms Lab	1 Hr 1 Hr/Day For 4 Day/week	After every topic
Module 3: Introduction to Software	LU6	Standard & Application Software's	List and describe classes of software available for use today	Online Lecture. Multimedia presentation. Video Demonstration		Students will be able to understand the software's and its applications	Online Class-rooms Lab	2 Hr 1 Hr/Day For 4 Day/week	After every topic
Module 4: Operating Systems	LU7	What is Operating Systems: <ul style="list-style-type: none"> • Standards OS • Windows • Linux • Macintosh 	Identify common elements in a graphical user interface. Compare and contrast operating systems to include graphical user	Online Lecture. Multimedia presentation. Video Demonstration		Students able to understand the OS and types of Operating Systems	Online Class-rooms Lab	3 Hr 1 Hr/Day For 4 Day/week	After every topic

			interface and nongraphical user interface environments.						
Module 5: Networks	LU8	Network basic Network Standards Section of Networks	Identify media, hardware, software, and procedural components linking networks systems	Online Lecture. Multimedia presentation. Video Demonstration		Students able to understand the Networks and types of networks	Online Class-rooms Lab	2 Hr 1 Hr/Day For 4 Day/week	After every topic
	LU9	The Internet and the World Wide Web & Web Page	Evaluate options for connecting to the Internet. Send e-mail, and identify resources available on the Web.	Online Lecture. Multimedia presentation. Video Demonstration		Students able to understand the Internet and Communication System	Online Class-rooms Lab	2 Hr 1 Hr/Day For 4 Day/week	After every topic
Module 6: Information Systems in Education	LU10	Introduction to Education Application	Discuss current ethical issues from personal, business, and education perspectives. Describe how spreadsheet packages are used in a variety of settings. Describe how presentation	Online Lecture. Multimedia presentation. Video Demonstration		Students able to understand the education application and their structures i.e. LMS	Online Class-rooms Lab	2 Hr 1 Hr/Day For 4 Day/week	After every topic

			graphics packages are used in a variety of settings. List the advantages and disadvantages of database systems.						
Module 7: Database	LU11	Introduction to database Productivity Software -- Spreadsheets Databases	List the advantages and disadvantages of database systems. Develop strategies necessary to retrieve electronically published articles.	Online Lecture. Multimedia presentation. Video Demonstration		Students able to understand the Database and types of database.	Online Class-rooms Lab	1 Hr 1 Hr/Day For 4 Day/week	After every topic

Practicum:

Students will work on the Microsoft Offices (Word, Excel, PowerPoint and Access) and Adobe Photoshop as practicum 1 Hour for 4 days a week.

Assessment

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended methodology	Scheduled dates
LU1 Introduction to computer Science	Module 1	Online Class	Exmaple	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every module
LU2	Module 1	Online Class	<p>MCQs</p> <p>1. CD-ROM stands for _____</p> <p>a. Compactable Read Only Memory b. Compact Data Read Only Memory c. Compactable Disk Read Only Memory d. Compact Disk Read Only Memory</p> <p>2. VGA is</p> <p>a. Video Graphics Array b. Visual Graphics Array c. Volatile Graphics Array d. Video Graphics Adapter</p> <p>3. IBM 1401 is _____</p> <p>a. First Generation Computer b. Second Generation Computer c. Third Generation Computer d. Fourth Generation Computer</p>	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every module

			<p>4. WAN stands for</p> <ul style="list-style-type: none">a. Wap Area Networkb. Wide Area Networkc. Wide Array Netd. Wireless Area Network <p>5. Chief component of first generation computer was</p> <ul style="list-style-type: none">a. Transistorsb. Vacuum Tubes and Valvesc. Integrated Circuitsd. None of above		
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HGC-015
Summary:

Islamic Studies

1(1-0)

Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes	Theory Days/hours	Workplace Days/hours	Credits
MODULE 1 (Orientation)	NA	. Introduction . Course outlines . Method and procedure regarding classes . Assessment criteria	<ul style="list-style-type: none"> • Clear understanding regarding their input to the subject 	01 hr. 01 hr.	NA	NA
MODULE 2 (Semester 1)	Learning Unit 1	1.Preservation of the Holy Quran 2. Preservation of the Ahadith of the Holy Prophet(s.a.w.) 3.Selection from the Holy Quran 4. Selection from the Hadith of the Holy Prophet (s.a.w.)	By the end of the lesson students should be able to, 1. Outline the main stages of compilation of the Quran 2. Outline the main stages of compilation of Hadith 3. Reasons to why both were preserved 4. Importance of their preservation 5. Quranic concept about the world and its nature 6. Relationship of man with this world 7. Teachings of the Holy Prophet(s.a.w.) to understand his status	04 hours	-	-

	Learning Unit 2	1.Rights of Allah and Rights of His creation: Theory & Practice 2.Companions of the Holy Prophet (s.a.w) 3.Stories of the Prophets Ibrahim(a.s.), Yousaf(a.s) and Isa (a.s.) 4.Muslims contribution to science	- The different kinds of rights and then the expected duties towards others - basic demands of belief - Main lessons from the lives of the Prophets (a.s.) - Importance of the Muslim contribution to the science	04 hour	-	-
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	<p>Learning Units 3</p>	<p>1.Relation with non Muslims 2.Freedom of thought and living in Islamic perspective 3.Muslim world : Past and future 4.Merits of serving humanity in Islam</p>	<p>- Main teachings of Islam regarding behaving towards other religions - Limitations and restrictions with permissions granted in Islam in few aspects of life - Brief introduction of Islamic world and its importance - Identify some benefits which other can get from us as individuals</p>	<p>04 hours</p>		
	<p>Learning Unit 4</p>	<p>1.Modern issues in medical science and the Islamic point of view 2.Pillars of Islam</p>	<p>- Know the principles to apply them on newly born issues in medical science - Know the basic teachings with importance of the pillars of Islam</p>	<p>04 hours 1 hour/week 4 days/month</p>		

Semester Plan:

Unit 1				
	week: 01	week: 02	week: 03	week: 04
Topics	1. Introduction 2. Moral teachings of the Holy Quran	<ul style="list-style-type: none"> Moral teachings of the Holy Prophet(S.A.W) 	<ul style="list-style-type: none"> Health and disease ,an Islamic framework 	<ul style="list-style-type: none"> Nursing in the Islamic history
Lecture Notes and reading material	<ul style="list-style-type: none"> Will be given during the class 	<ul style="list-style-type: none"> Will be given during the class 	<ul style="list-style-type: none"> Will be given during the class 	<ul style="list-style-type: none"> Will be given during the class
Tests			<ul style="list-style-type: none"> Quiz/Writt 	<ul style="list-style-type: none"> Quiz

Unit 2				
	week: 05	week: 06	week: 07	week: 08
Topics	<ul style="list-style-type: none"> • Preservation of the Revelations 	<ul style="list-style-type: none"> • Nursing and the rights of fellow beings (<i>Huquq ul Ibad</i>) 	<ul style="list-style-type: none"> 1.Nursing and the rights of fellow beings (<i>Huquq ul Ibad</i>) 	<ul style="list-style-type: none"> Contemporary issues in the modern Medical science and Religious Views
Lecture Notes and reading material	<ul style="list-style-type: none"> • Will be given during the class 	<ul style="list-style-type: none"> • Will be given during the class 	<ul style="list-style-type: none"> • Will be given during the class 	<ul style="list-style-type: none"> • Will be given during the class
Tests	<ul style="list-style-type: none"> • Unit 1 test 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Quiz 	<ul style="list-style-type: none"> • Students' presentations

Unit 3

	week: 09	week: 10	week: 11	week: 12
Topics	<ul style="list-style-type: none"> •Reason and revelation 	<ul style="list-style-type: none"> • Faith and practice: an analytical approach 	<ul style="list-style-type: none"> •Relations with Non Muslims (teachings and practice) 	<ul style="list-style-type: none"> • Nursing profession and Modesty
Lecture Notes and reading material	<ul style="list-style-type: none"> • Will be provided in the class 	<ul style="list-style-type: none"> • Will be provided in the class 	<ul style="list-style-type: none"> • Will be provided in the class 	<ul style="list-style-type: none"> • Will be provided in the class

Tests	• Mid term exam	•		• Quiz
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Unit 4

	week: 13	week: 14	week: 15	week: 16
Topics	Pillars of Islam :significance in the practical life	1.Muslims’ contribution in the Medical field 2.Pillars of Islam: Description and Significance	1.Social norms and the Nursing 2. Selected supplications	• End of Term exam
Lecture Notes and reading material	•	• Will be Provided Before Lecture	• Will be Provided Before Lecture	
Tests	• Unit 4 test	•	•	• Final Term exam

HGC - 017

English - I

1(1-0)

Course Name: English

Rationale

Students level of understanding, and analytical skills should be enhanced. They will be able to communicate in English in a better way.

Aim

To provide opportunities for students to enhance their comprehension, grammar, listening, speaking and writing skills.

Objectives

The main objectives of this course are;

- Students will be able to comprehend English.
- They will be able to converse in English in a better way.
- Students will be able to write different reports in their required field.

Summary

Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes	Theory Days/hours	Workplace Days/hours
Module 1 (orientation course) Module 2 (1 st semester) Module 3 (2 nd semester)					
Module 2 (1 st semester)	1. Communication Skills	<ol style="list-style-type: none"> 1. Introduction to communication skills. 2. Types of effective communication 3. Techniques of effective communication. 	<ol style="list-style-type: none"> 1. Learn about the needs of effective communication. 2. Learn about the importance of effective communication. 3. Learn about different types of effective communication. 4. Learn / understand about the various techniques of effective communication. 5. Apply their knowledge in different situation. 		

Module 2 (1 st semester)	2. GRAMME R	<ol style="list-style-type: none"> 1. Vowel & Consonants 2. Forms of Sentences 3. Compound Sentences 4. Preposition 5. The Present Tenses (2hrs) 6. The Past Tenses (2hrs) 7. Future + Revision (2hrs) 	<p>By the end of the lesson students should be able to,</p> <ol style="list-style-type: none"> 1. Differentiate between Vowel & Consonants sounds. 2. Explain different forms of sentences. 3. Complete the given exercises with the help of Conjunctions. 4. Use correct preposition in the given sentences. 5. Recall the basic rules of present tenses. Convert the given sentences from one tense to other. 6. Revise the rules of past tenses. Use the past tense in its correct context. 7. Learn the rules of future tense. Revise all the tenses. Convert one tense to another. 8. Learn about all the 7 punctuation makes. Use them correctly in the given exercises. 9. Differentiate between different parts of speech. Use them correctly in the given exercises. 10. Write the correct verb according to its subject. 11. Differentiate between prefix suffix & root words. Complete the given exercises about prefix, suffix & root words. 	11 DAYS	
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Module 2 (1 st semester)	3.Comprehension	<ol style="list-style-type: none"> 1. Comprehension passages from the given in books. 2. English grammar & composition by Wren & Martin. 3. Junior English Grammar. 4. http://www.teachervision.fen.com/tv/printables/0876281420121.ptf 	<ol style="list-style-type: none"> 1. Comprehend the given passages. 2. Revise the given passage. 3. Answer the given questions. (Oral & Written) 4. Search the past tense from the passage. 5. Rewrite the given passage in their own words. 	4 DAYS	
Module 2 (1 st semester)	4.Composition	<ol style="list-style-type: none"> 1. Paragraph writing 2. Essay writing 	<ol style="list-style-type: none"> 1. Write a paragraph/essay on the given topic. 2. Differentiate between paragraph and essay writing. 3. Use different grammar components in each given topics. 4. Differentiate between essay. 	4 DAYS	

Lesson Plan

LU	Topic	Duration depends on previous knowledge	Learning outcomes After completing this topic, the learner should be able to:	Materials required NOTE: Participants should have their own workbooks and pens	Learning place
LU 1. COMMUNICATION SKILLS	Introduction to communication skills.	1 LESSION (60 MINTS) 60 min	<ol style="list-style-type: none"> 1. Learn about the needs of effective communication. 2. Learn about the importance of effective communication. 3. Apply their knowledge in different situation. 	1. Online presentation	Learning Management System (LMS)
LU 2. COMMUNICATION SKILLS (CONTINUED)	Introduction to communication skills.	1 LESSION (60 MINTS) 60 min	<ol style="list-style-type: none"> 1. Learn about the needs of effective communication. 2. Learn about the importance of effective communication. 3. Apply their knowledge in different situation. 	1. Online presentation	Learning Management System (LMS)

<p>LU 3 COMMUNICATION SKILLS & GRAMMAR</p>	<p>Types of effective communication</p> <p>Vowels and Consonants</p>	<p>1 LESSION (60 MINTS)</p> <p>40 min</p> <p>20 min</p>	<ol style="list-style-type: none"> 1. Learn about the importance of effective communication. 2. Learn about different types of effective communication. 3. Apply their knowledge in different situation. 4. Differentiate between Vowel & Consonants sounds. 	<p>1. Online presentation</p> <ol style="list-style-type: none"> 1. Work sheets 2. White board 2. Text book (English Grammar and composition by Wren & Martin) 	<p>Learning Management System (LMS)</p>
<p>LU 4. COMMUNICATION SKILLS & COMPREHENTOIN</p>	<p>Techniques of effective communication</p> <p>Comprehension</p>	<p>1 LESSION (60 MINTS)</p> <p>30 min</p> <p>30 min</p>	<ol style="list-style-type: none"> 1. Learn / understand about the various techniques of effective communication. 2. Apply their knowledge in different situation. 3. Comprehend the given passages. 4. Revise the given passage. 5. Answer the given 	<p>Online presentation</p> <p>Work sheets</p> <p>White board</p>	<p>Learning Management System (LMS)</p>

			questions. (Oral & Written)		
LU 5. COMPREHENSION & GRAMMAR	Comprehension Forms And Sentences	1 LESSION (60 min) 20 min 40 min	1. Use different grammatical components in given topic. 2. Comprehend the given passages. 3. Revise the given passage. 4. Answer the given questions. (Oral & Written)	1. Work Sheets 2. White Board 3. Oral presentation	Learning Management System (LMS)
LU 6. COMPOSITION	Paragraph writing	1 LESSION (60 min) 60 min	1. Write a paragraph on the given topic.		Learning Management System (LMS)
LU 7. COMPOSITION & GRAMMAR	Paragraph writing Compound sentences	1 LESSION (60 min) 40 min 20 min	1. Write a paragraph on the given topic. 2. Demonstrate different forms of sentences. 3. Differentiate between simple and compound sentences.		Learning Management System (LMS)

LU 8. & COMPREHENSION	Comprehension	1 LESSION (60 min) 60 min	4. Comprehend the given passages. 5. Revise the given passage. 6. Answer the given questions. (Oral & Written).	1. Work Sheets 2. White Board 3. Oral Presentation	Learning Management System (LMS)
LU 9. COMPOSITION	Essay Writing	1 LESSION (60 min) 60 min	1. Differentiate between paragraph and essay writing. 2. Write essay on given topics.	1. Work Sheets 2. White Board 3. Online Presentation	Learning Management System (LMS)
LU 10. COMPOSITION (CONTINUED) & GRAMMAR	Essay Writing Preposition	1 LESSION (60 min) 30 min 30 min	1. Differentiate between paragraph and essay writing. 2. Write essay on given topics. 3. Use correct preposition in the sentences. 4. Use different grammatical components in given topics.	1. Work Sheets 2. White Board 3. Online Presentation	Learning Management System (LMS)

LU 11. GRAMMAR	The Present Tense	1 LESSION (60 min) 60 min	<ol style="list-style-type: none"> 1. Revise the rules of Present Tenses. 2. Use the Present tense in its correct context. 	<ol style="list-style-type: none"> 1. Work Sheet 2. A-V Presentation 3. PowerPoint Presentation. 	Learning Management System (LMS)
LU 12. GRAMMAR	The Past Tense	1 LESSION (60 min) 60 min	<ol style="list-style-type: none"> 1. Revise the rules of Past Tenses. 2. Use the Past tense in its correct context. 	<ol style="list-style-type: none"> 1. Work Sheet 2. A-V Presentation 3. PowerPoint Presentation. 	Learning Management System (LMS)
LU 13. GRAMMAR	The Future Tense	1 LESSION (60 min) 60 min	<ol style="list-style-type: none"> 1. Revise the rules of Future Tenses. 2. Use the Future tense in its correct context. 	<ol style="list-style-type: none"> 1. Work Sheet 2. White Board 3. Revision work Sheet (Online) 	Learning Management System (LMS)
LU 14. GRAMMAR	Revision Exercise of Different Tenses	1 LESSION (60 min) 60 min	<ol style="list-style-type: none"> 1. Demonstrate the rules of all the tenses for enhancement in the communication skills. 	<ol style="list-style-type: none"> 1. Work Sheet 2. White Board 3. Revision work Sheet (Online) 	Learning Management System (LMS)

LU 15. COMPREHENSION	Comprehension	1 LESSION (60 min) 60 min	<ol style="list-style-type: none"> 1. Comprehend the given passages. 2. Revise the given passage. 3. Answer the given questions. (Oral & Written) 	<ol style="list-style-type: none"> 4. Work sheet 5. Website (Online Comprehension) 	Learning Management System (LMS)
LU 16. COMPOSITION	Essay Writing	1 LESSION (60 Min) 60 min	<ol style="list-style-type: none"> 1. Differentiate between paragraph and essay writing 2. Write essay on given topics. 	<ol style="list-style-type: none"> 1. Work Sheet 2. White Board 3. Online Presentation 	Learning Management System (LMS)
LU 17 COMMUNICATION SKILLS & COMPREHENSION	Communication skills Online Comprehension	1 LESSION (60 min) 30 min 30 min	<ol style="list-style-type: none"> 1. Learn about the needs of effective communication. 2. Learn about the importance of effective communication. 3. Learn about different types of effective communication. 4. Learn / understand about the various techniques of effective communication. 	<ol style="list-style-type: none"> 1. Work Sheet 1. White Board 	

			5. Apply their knowledge in different situation.		
LU 18. COMPREHENSION	Revision (Online Comprehension + tenses)	1 LESSION (60 min) 60 min		1. Work Sheets 2. White Board 3. Online Comprehension 4. Work Sheet (Revision)	Learning Management System (LMS)

Assessment

Learning Units	Theory hours	Workplace Days	Recommended formative assessment	Recommended methodology	Scheduled dates
LEARNING UNIT 1 Communication Skills			<p>A. True/False statements:</p> <ul style="list-style-type: none"> - There are only three channels for interpersonal communication. T/F - Avoiding of argument is a part of effective communication technique. T/F - Communication Skills are important in our daily life. T/F - Body language is a part of effective Communication. T/F - It is easy to acquire communication Skills. T/F <p>B. MCQs</p> <ul style="list-style-type: none"> i) There are ----- types of communication skills. <ul style="list-style-type: none"> a. 2 b. 3 c. 4 i) The responding step of listening: <ul style="list-style-type: none"> 1. is the result of remembering. 2. is nonverbal. 3. is verbal. 4. can be verbal or nonverbal 	<p>LU 1:QUIZ (MCQS)</p> <p>LU1: ASSIGNMENT</p> <p>LU1: PRESENTATION</p> <p>LU 2: EXERCISE</p> <p>LU1: QUIZ</p> <p>LU3:ASSIGNMEN T</p> <p>LU2: EXERCISE</p> <p>LU3: ASSIGNMENT</p> <p>LU4: ASSIGNMENT</p> <p>LU2: EXERSISE</p> <p>LU 4: ASSIGNMENT</p> <p>LU3: EXCERSISE</p> <p>LU 4:</p>	<p>Week 1</p> <p>Week 2</p> <p>Week 3</p> <p>Week 4</p> <p>Week 5</p> <p>Week 6</p> <p>Week 7</p> <p>Week 8</p> <p>Week 9</p> <p>Week 10</p> <p>Week 11</p>

			<p>2. Logic and reasoning are key to</p> <ol style="list-style-type: none"> 1. message understanding 2. receiving a message 3. responding to as message 4. critical listening 	<p>ASSIGNMENT</p>	<p>Week 12</p>
				<p>LU2: EXERCISE</p>	<p>Week 13</p>
				<p>LU4: PRESENTATION</p>	<p>Week 14</p>
			<p>3. Which of the three components are parts of the human communication process?</p>	<p>LU2: EXERCISE</p>	<p>Week 15</p>
			<ol style="list-style-type: none"> 1. Message, recording, feedback 2. Noise, feedback, jargon 3. Message, noise, feedback 4. Feedback, message, critiquing 	<p>LU2: EXERCISE</p>	<p>Week 16</p>
				<p>LU2: EXERCISE</p>	<p>Week 17</p>
				<p>LU3: ONLINE PRESENTATION</p>	<p>Week 18</p>
				<p>LU4: ONLINE PRESENTATION</p>	
				<p>LU1: ONLINE PRESENTATION</p>	
				<p>LU 3: ASSIGNMENT</p>	
				<p>LU 3: ONLINE PRESENTATION AND EXERCISE</p>	

<p>LU 2. GRAMMER</p>			<p>How many sounds are there in English language? a. 44 b. 26 c. 42</p> <p>There are form of sentences a. 3 b. 4 c. 5</p> <p>There are main tenses. a. 2 b. 3 c. 4</p> <p>In future tense use ___ a. Will b. Are c. Had</p> <p>The sample present tense is used to ____ a. Express a habitual action and general truth. b. Express a general truth. c. Express a habitual action. d. Non of these</p> <p>There aren't _____ people here. 1. Much 2. Many 3. a lot 4. some</p>		
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			<p>You should _____ your homework.</p> <ol style="list-style-type: none"> 1. Make 2. Do 3. Work 4. Give 		
LU 3: COMPREHENSION			<ol style="list-style-type: none"> 1. Rewrite the given passage in your own words. 2. Answer the MCQs from the given Passage. 3. Answer the given questions from the comprehension passage. 		
LU 4: COMPOSITION			<ol style="list-style-type: none"> 1. Write the Paragraph/Essay on the given topic. 		

SEMESTER - II

PTC-009

Physiotherapy Techniques

6(2-4)

Competencies

1. Understanding physiotherapy techniques, its utilization, effects and safety precautions

Learning Objectives

- a. To define various terms used in physiotherapy.
- b. To introduce and understand application and effects of various tools of physiotherapy including Cryotherapy, Thermotherapy (superficial and deep heating agents).
- c. To introduce and understand application and effect of various simulators including Faradic, Galvanic, T.E.N.S and IFT.
- d. To introduce and understand application and effects of electrotherapy.
- e. To introduce and understand application and effects of massage therapy.
- f. To introduce and understand application and effects of exercise therapy and yoga:
- g. To introduce and understand exercise physiology including Energy system/metabolism, foods and nutrition, thermo regulation, respiration, cardiovascular adaptation, fatigue, exhaustion, endurance and bio mechanics.

PTC-010

Applied Anatomy

4(1-3)

Competencies

1. Gain knowledge of common clinical conditions involving Axial and Appendicular skeleton.

Learning Objectives

1. To introduce and understand common clinical condition of Axial and Appendicular skeleton: Carpal tunnel syndrome, Erb's Palsy, Dupuytren contracture, Trigger finger, Mallet finger and Wrist ganglion
2. To introduce and understand Rotator cuff. Impingement syndrome, fixed flexion deformity, wrist drop, road traffic accident, deltoid ligament rupture, Achilles tendon rupture, genu valgum/vera, hallux valgus and foot drop.

Summary

Credit Hours: 2(1-1) [Theory 1 credit hour = 18 hours and Practical 1 credit hour =36 Hours]

Per Module = [0.25credit for theory and 0.25 for practical]
4 1/2 Hours or 0.25 Credit Hours/module

Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace vii Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module-I <u>Applied Anatomy</u>	<u>LU 1:</u> Introduction to Applied Anatomy and Applied Anatomy of Shoulder	1. Introduction to Applied Anatomy 2. Shoulder joint and Shoulder Girdle a. Dislocations and Subluxations	1. Understand the definition Applied Anatomy 2. Understand the etiology of dislocations and subluxation and its difference 3. Understand the	1Hour	Class-rooms, 1 day a week, 1 hour lecture per day	Multimedia Lectures	1. Demonstration and assessment of shoulder complex dislocation, subluxation and degeneration by movements and x-rays	2 Hour	1. Able to assist shoulder joint when dislocated or subluxated

		b. Arthritis	degeneration of joint and its effects on movement and functions of joint						
	LU 2: Applied Anatomy of Shoulder	1. Shoulder a. Frozen shoulder b. Impingement syndrome, c. Rotator cuff tear d. Bursitis and Tendonitis	1. Understand the term frozen and differentiate it from other conditions 2. Explain the Impingements, muscle tear and inflammation of Bursa and tendons of shoulder joint	1Hour	Class-rooms, 1 day a week, 1 hour lecture per day	Multimedia Lectures	1.Demonstration and assessment of shoulder joint in impingement, muscle tear, tendonitis, bursitis and stiff shoulder	2 Hour	1.Able to assists and differentiate shoulder joint conditions

	<p>LU 3: Applied Anatomy of Elbow</p>	<p>1. Elbow a. Dislocation and subluxation b. Epicondylitis (Medial and Lateral) c. Bursitis and Tendonitis d. Arthritis</p>	<p>1. Understand the etiology of dislocations and subluxation and its difference 2. Describe the inflammation of joint and bone with tendon and bursa 3. Understand the degeneration of joint and its effects on movement and functions of joint</p>	1Hour	Class-rooms, 1 day a week, 1 hour lecture per day	Multimedia Lectures	<p>1. Demonstration and assessment of elbow joint's dislocation, subluxation and degeneration by movements and x-rays 2. Demonstration and assessment of Elbow joint in tendonitis, bursitis and stiff elbow</p>	2Hour	1. Able to assists and differentiate elbow joint conditions
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	LU 4: Applied Anatomy of Wrist Joint and Hand	1. Wrist Joint and Hand a. Dislocation and subluxation b. Bursitis and Tendonitis c. Arthritis	1. Understand the etiology of dislocations and subluxation and its difference 2. Explain the inflammation of Bursa and tendons of shoulder joint 3. Understand the degeneration of joint and its effects on movement and functions of joint	1 ½ Hours	Class-rooms, 1 day a week, and 1 ½ hour lecture per day or 2 days a week, and 45 minutes lecture per day	Multimedia Lectures	1. Demonstration and assessment of wrist joint and hand joint's dislocation, subluxation and degeneration by movements and x-rays 2. Demonstration and assessment of wrist joint and hand in tendonitis, bursitis and stiff Joints	3 Hours	1. Able to assists and differentiate wrist and hand conditions
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Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace viii Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module II <u>Applied Anatomy</u>	<u>LU 1:</u> Applied Anatomy of Hip Joint	1.Hip Joint and hip Girdle : a. Dislocations and Subluxations b. Arthritis c. Tendonitis and Bursitis	1. Understand the etiology of dislocations and subluxation and its difference 2. Understand the degeneration of joint and its effects on movement and functions of joint 3. Explain the inflammation of Bursa and tendons of shoulder joint	1 Hour	Class-rooms, 1 day a week, 1 hour lecture per day	Multimedia Lectures	1. Demonstration and assessment of Hip complex dislocation, subluxation and degeneration by movements and x-rays 2. Demonstration and assessment of hip joint in muscle tear, tendonitis, bursitis and stiff	2 Hour	1. Able to assists and differentiate hip joint conditions

							hip		
	LU 2: Applied Anatomy of Knee joint	1. Knee Joint: a. Dislocations and Subluxations b. Tendonitis and Bursitis c. Arthritis d. Patellofemoral syndrome e. Meniscal Injuries	1. Understand the etiology of dislocations and subluxation and its difference 2. Explain the inflammation of Bursa and tendons of shoulder joint 3. Understand the degeneration and injuries of its components and its effects on movement and functions of joint	1 Hour	Class- rooms, 1 day a week, 1 lecture per day	Multimedi a Lectures	1. Demonstration and assessment of knee joint dislocation, subluxation and degeneration by movements and x-rays 2. Demonstration and assessment of Knee joint in muscle tear, tendonitis, bursitis and stiff knee	2 Hour	1. Able to assists and differentiate knee joint conditions

	<p>LU 3: Applied Anatomy of Ankle joint and Foot</p>	<p>1. Ankle Joint and Foot: a. Dislocations and Subluxations b. Tendonitis and Bursitis c. Arthritis d. Sprains and Strains</p>	<p>1. Understand the etiology of dislocations and subluxation and its difference 2. Explain the inflammation of Bursa and tendons of shoulder joint 3. Understand the degeneration of joint and its effects on movement and functions of joint 4. Understand and differentiate between the sprain and strain on joint</p>	<p>1 Hour</p>	<p>Class-rooms, 1 day a week, 1 hour lecture</p>	<p>Multimedia Lectures</p>	<p>1. Demonstration and assessment of ankle joint and foot joint's dislocation, subluxation and degeneration by movements and x-rays 2. Demonstration and assessment of ankle joint and foot in tendonitis, bursitis, sprains and stiff Joints</p>	<p>2 Hour</p>	<p>1. Able to assists and differentiate ankle joint and foot conditions</p>
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	LU 4: Applied Anatomy of Spine	<p>1. Spine</p> <p>a. Dislocations and Subluxations</p> <p>b. Arthritis</p> <p>c. Disc Prolapsed</p>	<p>1. Understand the etiology of dislocations and subluxation and its difference</p> <p>2. Understand the degeneration of joint and its effects on movement and functions of joint</p> <p>3. Understand the different disc conditions</p>	1 ½ Hours	Class-rooms, 1 day a week, and 1 ½ hour lecture per day or 2 days a week, and 45 minutes lecture per day	Multimedia Lectures	<p>1. Demonstration and assessment of Spine (inter-vertebral joints) dislocation, subluxation and degeneration by movements and x-rays</p> <p>2. Demonstration and assessment of Back in disc prolapsed</p>	3 Hours	1. Able to assist and differentiate spine conditions in disc prolapsed and degenerative changes
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Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace ix Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module-III Applied Anatomy	LU 1: Applied Anatomy of Spine	1. Spine a. Spinal Stenosis b. Lumbago c. Sciatica d. Scoliosis and Kyphosis	1. Understand the term Stenosis, Lumbago and sciatica and its effect on body function. 2 .Explain and understand the mechanical and pathological problems of spine and curvatures disorders	1 Hour	Class-rooms, 1 day a week, 1 hour lecture per day	Multimedia Lectures	1. Demonstration and assessment of Back in spinal stenosis, back pain and mechanical disorders by movements and x-rays	2 Hour	1. Able to assists and differentiate spine conditions in disc different conditions

<p><u>LU 2:</u> <u>Fracture</u> <u>s:</u></p>	<p>1. Introduction to Fractures 2. Causes of Fractures 3. Types Of fractures 4. Treatment of Fractures</p>	<p>1. Define and explain the term fracture. 2. Understand the causes and types of fractures 3. Understand the different mode of treatments in fractures</p>	<p>1 Hour</p>	<p>Class-rooms, 1 day a week, 1 lecture per day</p>	<p>Multimedia Lectures</p>	<p>1. Demonstration of different types of fractures by x-rays</p>	<p>2 Hour</p>	<p>1. Able to assist and identify type and bone of fracture.</p>
<p><u>LU 3:</u> <u>Fracture</u> <u>s:</u></p>	<p>1. Fractures of Upper limb</p>	<p>1. Understand and identify the types of fractures of Upper limb and its treatments</p>	<p>1 Hour</p>	<p>Class-rooms, 1 day a week, 1 hour lecture per day</p>	<p>Multimedia Lectures</p>	<p>1. Demonstration of different types of fractures by x-rays</p>	<p>2 Hour</p>	<p>1. Able to assist and identify type and bone of fracture.</p>

	LU 4: Fractures:	1. Fractures of Lower limb	1. Understand and identify the types of fractures of Lower r limb and its treatments	1 ½ Hours	Class-rooms, 1 day a week, and 1 ½ hour lecture per day or 2 days a week, and 45 minutes lecture per day	Multimedia Lectures	1. Demonstration of different types of fractures by x-rays	3 Hours	1. Able to assist and identify type and bone of fracture.
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Modules	Learning Units(LU)	Topics	Learners should be able to achieve these Outcomes under supervision of qualified physiotherapist	Duration hours per week	Workplace x Days/hours	Recommended Methodology	Practical Lab/ Class Room	Duration hours per week	Skills under supervision of qualified physiotherapist
Module-IV Applied Anatomy	LU 1: Fractures:	1. Fracture of Spine 2. Fractures of ribs 3. Skill Fractures	1. Understand and identify the types of fractures of Spine and its treatments 2. Understand and identify the types of fractures of Ribs and its treatments 3. Understand and identify the types of fractures of Skull and its treatments	1 Hour	Class-rooms, 1 day a week, 1 hour lecture per day	Multimedia Lectures	1. Demonstration of different types of fractures by x-rays	2 Hour	1. Able to assist and identify type and bone of fracture.

	<u>LU 2:</u> Peripher al Nerves and Arteries	1.Common Nerve and artery Entrapments 2. Nerve and Artery Injuries 3. Nerve and Artery Diseases	1. Understand the different injuries and diseases of nerve and artery and its effect on muscle, bone and joint.	1 Hour	Class- rooms, 1 day a week, 1 lecture per day	Multimedi a Lectures	1.Demonstration of assessment and examination nerve injuries	2 Hour	1.Able to define peripheral nerve and arterial injuries
	<u>LU 3:</u> Cranial Nerves and Arteries	1. Injuries, Entrapments and diseases of cranial nerves and arteries	1. Understand the different injuries and diseases of nerves and arteries and its effect on brain, muscle, bones and joint.	1Hour	Class- rooms, 1 day a week, 1 hour lecture per day	Multimedi a Lectures	1.Demonstration of assessment and examination nerve injuries	2 Hour	1.Able to define cranial nerve and arterial injuries

	<u>LU 4:</u> Bone, Muscles, and ligament	1.Diseases of Bone, Muscles, and Ligaments (inflammations, Infections, T.B., Benign Tumors, Malignant Tumors etc)	1. Understand the different conditions and diseases of bone, muscles and ligament.	1 ½ Hours	Class-rooms, 1 day a week, and 1 ½ hour lecture per day or 2 days a week, and 45 minutes lecture per day	Multimedia Lectures	1. Demonstration of bone and muscle impairments by different investigations	3 Hours	1. Able to define different conditions of bone, muscle and ligament.
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Assessment

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended methodology	Scheduled dates
Applied Anatomy	Module - I	Class	Examples	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every Class/Module
<u>Applied Anatomy</u> <u>LU1 –LU4</u>	Module - I	Class	<p><u>MCQ'S:</u></p> <p>Q.1. Frozen shoulder is adhesive capsulitis</p> <p style="padding-left: 20px;">g. True</p> <p style="padding-left: 20px;">h. False</p> <p>Q.2. Winging of the scapula is due to</p> <p style="padding-left: 40px;">Long thoracic nerve injury</p> <p style="padding-left: 20px;">a. True</p> <p style="padding-left: 20px;">b. False</p> <p>Q.3. Wrist drop is due to injury of</p> <p style="padding-left: 20px;">a. Ulnar nerve</p> <p style="padding-left: 20px;">b. Radial nerve</p> <p>Q.4. Tennis elbow is the inflammation of</p> <p style="padding-left: 20px;">a. Medial epicondyle</p> <p style="padding-left: 20px;">b. Lateral epicondyle</p>	<ul style="list-style-type: none"> • Multiple Choice Questions • Best Choice Questions • Viva 	After every Class/Module

BCQ'S

Q.1. Most common dislocation of shoulder joint is

- i. Anterior
- j. Posterior
- k. Inferior
- l. Superior

Q.2. Feber's or Patrick's test is for dysfunction of

- a. Knee
- b. Hip
- c. Ankle
- d. Shoulder

Q. 3. Meniscal injury of knee joint is assist by

- a. McMurray test
- b. Lachman's test
- c. Apley's test
- d. Stress Test

PTC-011

Applied Physiology

4(1-3)

Competencies

1. General understanding of the body functions at the cellular and systemic levels and clinical conditions.

Learning Objectives

1. To introduce structure and functions of cells
2. To introduce structure and functions of heart and blood circulation
3. To introduce structure and functions of peripheral and central nervous system
4. To introduce structure and functions of skin and temperature regulation
5. To introduce structure and functions of digestive system
6. To introduce structure and functions of respiratory system including artificial respiration
7. To introduce structure and functions of endocrine glands including characteristics and function of hormones
8. To introduce structure and functions of excretory system
9. To introduce structure and functions of reproductive system and physiology of pregnancy

Practicum

1. Case study recording and follow-up in clinic on patient.
2. Identification of bones, nerve routes and muscles.
3. Identification of tools and equipment.
4. Study of different X-ray plates, related surface, reading X-Ray plates.
5. Types of joints and their movement in different axes, nerve muscle, physiology, idea of reflexes and their examination, measurement of BP pulse.
6. Techniques of massage of different parts of human body and its therapeutic application of massage.
7. Application of ice pack, cold pack, ice bath, ice towel and ice cube massage, hot packs massage and Kenny pack massage.
8. Practice on wax bath preparation and its application.
9. Practice on Infrared applications.
10. Practice on short wave and medium wave diathermy.
11. Practice on application of TENS.
12. Practice on application of UST.
13. Practice on application of traction, gait training and uses of walking aids.
14. Demonstration and AV display of practicum.

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25. Physiotherapy in Orthopaedics, A problem-solving approach By: Atkinson, Coutts &Hassenkamp 2nd Edition.
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- ⁱ Training workshop, laboratory and on-the-job workplace
 - ⁱⁱ Training workshop, laboratory and on-the-job workplace
 - ⁱⁱⁱ Training workshop, laboratory and on-the-job workplace
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 - ^v Training workshop, laboratory and on-the-job workplace
 - ^{vi} Training workshop, laboratory and on-the-job workplace
 - ^{vii} Training workshop, laboratory and on-the-job workplace
 - ^{viii} Training workshop, laboratory and on-the-job workplace
 - ^{ix} Training workshop, laboratory and on-the-job workplace
 - ^x Training workshop, laboratory and on-the-job workplace