

Curriculum
for the
Core Course
of
Two Years' Post Matric
Diplomas in Allied Health Sciences
(New Scheme)

First Edition 2013



Punjab Medical Faculty

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Preface

After introduction of the new service structure for Allied Health Professionals (AHPs) in 2012, the qualification requirement for entry in service has been changed to a diploma of two years' duration. This decision has necessitated the development of curricula for the new scheme of studies. The evolving health needs of the community, exponential advances in medical and allied technologies and changes in health services provision, functions and structure also demand continual and responsive changes in education and training programs meant for AHPs. The revised curricula would carry out the following important functions:

- link pre-service education and training with actual tasks AHPs have to perform after being employed, especially in the public sector
- modernize training program by weeding out subjects that have become obsolete and including subjects that are currently considered essential
- provide clarity on subjects and topics to be taught delimiting the breadth and depth of teaching
- give clarity to examiners on what is to be tested and how
- stimulate critical faculties of both teachers and students to conceptualize topics rather than memorizing them.

The new scheme of studies provides opportunities for training in the following technologies:

- a. Public Health Technology
- b. Operation Theater Technology
- c. Radiology /Imaging Technology
- d. Medical Laboratory Technology
- e. Dental Technology
- f. Ophthalmology / Vision Technology
- g. Physiotherapy

Focus of the new curricula for above technologies would be on integration of tasks and multi-skilling of students. Thus there would be a common knowledge base for all courses in the form of a Core Course which would provide insight into essential technical knowledge. The core course would also promote interdisciplinary team building strategies for effective co ordination between various Allied Health Science disciplines. This would also provide base for development of the education for Allied health Sciences up to post graduate level.

Section I

1. Allied Health Sciences

Allied Health Sciences (AHS) relate to study of health related sciences exclusive of Medical and Nursing education encompassing a diversity of disciplines. AHS are distinguishable from Medical and Nursing Sciences by being technology intensive and in diversity of disciplines.

2. Allied Health Professionals

Allied Health Professionals (AHPs) may be defined as skilled personnel specifically trained and qualified through a well outlined curriculum, registered with a professional body and working under the supervision of a qualified clinician against diagnostic, therapeutic, preventive and rehabilitative jobs.

Allied Health Professionals are involved with the delivery of health or related services pertaining to the identification, management and prevention of diseases and disorders; rehabilitation and health systems management. AHPs constitute the backbone of healthcare delivery in any country and may comprise up to 60 percent of the total health workforce. Their contribution is deemed essential for smooth functioning of health services at all levels in both public and private sectors.

AHPs function in several diverse settings and their services are critical to other health professionals they work with and the patients they serve. They are considered indispensable members of health teams; often they are the first line health workers that front healthcare services.

2.1. Work Activities and Skills

AHPs are autonomous professionals but they are also part of highly skilled multi-disciplinary teams. They must be proficient working with complex equipments which require continuous improvements in both knowledge and skills to keep pace with the fast moving developments. They should be able to offer support and encouragement while working closely with patients who may be anxious and distressed, particularly in therapeutic procedures. Besides the essential technical skills, in order to perform their roles efficiently they must also possess the following personal attributes:

- Communication skills
- Decision making skills
- Team-working skills
- Client care skills

3. Distribution of Training Time

The two years' program would be divided in three distinct parts (Papers). The 'Core Course' would be common for all technologies. The examination for this component will be taken at the end of first academic year. The teaching for specific aspects of this technology will be divided in two sections; examination for these will be held at the end of second academic year – however, teaching for specific techniques will start from the first year and sufficient time would be provided for practical attachments. There will also be practical / viva examination(s) for the relevant techniques. Theory and viva components will carry equal marks.

A typical training day for students at training institutions routinely comprises of five hours. Keeping a generous allowance of holidays and weekends, an academic year for students would be 200 days. Therefore, 1000 teaching hours would be available in 12 months. In the new scheme of studies, for the Core Course the proportion of classroom teaching and practical training (applied learning activities) would be 60:40; whereas this proportion for the specific techniques would be 40:60 and the time allocations for dividing teaching time between various topics, units and sub-units will be done accordingly as depicted below:

Core Course	500
Section I (Paper I)	750
Section II (Paper II)	750
Total	2000

4. Knowledge Assessment and Examination

There shall be an examination at the end of each academic year. The marks distribution for this diploma would be:

Subject	Marks
First Year	
Core Course	100
Viva	100
Second Year	
Section I	100
Section II	100
Practical / Viva Section I	100
Practical / Viva Section II	100
Total:	600

Practical / viva examination shall assess the concepts, recall and practical skills of students and shall carry 50% weightage. Details of assessment process are available in the Examination Policy of Punjab Medical Faculty.

5. Essential Teaching Requirements

5.1. Training requirements/instructional methodologies (Process)

- a. Teaching staff will be given in-service training as recommended by PMF from time to time.
- b. Teachers will use a combination of interactive programmed instructions (non-IT), class teaching with exercises using audiovisual aids, mini-lectures, group discussions, simulations and case studies as instructional/teaching methodologies.
- c. IT will be employed for teaching where necessary.
- d. A combination of English and Urdu languages will be used as medium of instruction.
- e. Teachers will encourage students to ask questions; they will encourage debate and discussion in class to inspire and hone thinking skills of students. Students will be given the opportunity to engage in activities that promote divergent thinking skills. Students will be encouraged to work independently, as well as in small groups and as a whole class, to form creative associations of ideas across discipline lines.

5.2. Practical learning component

Practical training will supplement teaching of basic subjects. Field learning will be carried out in hospital wards, operation theatres, diagnostic centers and for public health technicians in related places of significance. Teachers will ensure that students are given field learning activities that are relevant to the topic being taught in the class in order for them to develop relevant practical skills.

The detail of specifications for the institution imparting education according to the new scheme of studies is available in 'New Affiliation Criteria' for such institutions.

6. Organization of Units of Curriculum

The different units presented in the subsequent sections would comprise of the following components:

- a. Learning Focus (contents, hours, weightage for assessment)
- b. Rationale
- c. Scope
- d. Learning Objectives (aims and learning outcomes)
- e. Practical Learning Component (where applicable)

7. Revisions and Updating of Curriculum

The curricula are ever evolving organic documents. Regular reviews and revisions are, therefore, essentially required to keep them in pace with modern needs; topics that are required now might outlive their utility in a few years. Updating curricula therefore forms the basis for quality teaching as well as professional competence of AHPs. This would be ensured by technology-wise panels of experts notified by the Health Department.

Section II

Unit 1

Organization and Functioning of Health System

1. Learning Focus	
Concept and definition of 'Health'	2 hour
Introduction to the healthcare system: national, provincial and district	3 hours
The structure of healthcare delivery: primary, secondary and tertiary	5 hours
Important international agencies for health	3 hours
Private sector and its regulation	5 hours
Dynamics of team working	4 hours
Class Room Teaching	22 hours
Practical Attachments	0
Total Teaching	22 hours
Weightage for assessment	5%

2. Rationale

In order to effectively perform, an AHP needs to have the concept of health, an appreciation of the prevailing organizational environment and an understanding of his or her own job description. The **goal** of this unit, therefore, is to impart an appreciation of the larger operating environment. To acquire this familiarity, AHPs need to have an understanding of the healthcare systems and the health infrastructure.

3. Scope

The overall understanding of health system would help AHPs to relate their own performance with the objectives and performance of their parent department. This would also help them to better integrate with the teams of health professionals of which they would be integral part.

4. Learning Objectives

After completing unit 1 the students will be able to:

- i. define health as per WHO specifications
- ii. appreciate the general organization of the healthcare system and the healthcare delivery system
- iii. describe the regulatory framework for private health sector
- iv. list out the main international agencies involved in health sector including WHO and Unicef
- v. demonstrate skills required for working in a team

Unit II

Primary Health Care

1. Learning Focus	
The concept of 'Health for All'	2 hours
Primary Health Care: Components and Principles	10 hours
• Immunization	10 hours
• Reproductive Health / Family Planning	8 hours
• Nutrition	8 hours
• Environmental Health	8 hours
• Classification of Diseases	6 hours
• Management of Common Diseases	8 hours
Important Medical Terminologies	6 hours
Class Room Teaching	66 hours
Practical Attachments	0 hours
Total Teaching	66 hours
Weightage for assessment	15%

2. Rationale

Every member of health team needs to have basic understanding of the factors leading to poor health and the means for leading a healthy and balanced life. The Alma Ata Declaration of 1978 affirms the commitment of provision of optimal health services to each and every citizen, and also illustrates the means for achieving them. The **goal** of this unit is to impart an understanding of the five principles and eight components of primary healthcare approach and enable the health team members.

3. Scope

This unit will prepare the AHPs to perform as frontline health workers. The understanding of primary healthcare and its components would help AHPs to better comprehend and disseminate the principles of good health. The problems of vulnerable groups of society will specially be highlighted; there would be emphasis on issues of mother and child health and

their management. Concept of immunity and the vaccination schedule in vogue would be familiarized.

An understanding of elementary medical terminologies used in routine settings will be provided. This unit would also help AHPs to better integrate with the teams of health professionals of which they would be integral part.

4. Learning Objectives

After completing unit students will be able to:

- i. understand the holistic concept of health and the philosophy of PHC as an approach towards achieving Health for All
- ii. appreciate the five basic principles of PHC and their significance in general social development and delivery of health services
- iii. list out the components of PHC and their significance in healthcare
- iv. describe the significance of:
 - a. provision of adequate water supply and basic sanitation
 - b. promotion of improved nutrition
 - c. immunization against principal infectious diseases
 - d. prevention and control of locally endemic diseases
 - e. mother and child health including family planning

Unit 3

Human Body

Unit 3 has been further subdivided into the 8 sub units.

1. Learning Focus	
Sub-unit 3.1 Cardiovascular System (Circulatory System)	30 hours
Sub-unit 3.2 Digestive System	30 hours
Sub-unit 3.3 Pulmonary System	30 hours
Sub-unit 3.4 Musculoskeletal System and Skin	30 hours
Sub-unit 3.5 Nervous System	15 hours
Sub-unit 3.6 Excretory System	15 hours
Sub-unit 3.7 Reproductive System	15 hours
Sub-unit 3.8 Endocrine System	15 hours
Class Room Teaching	152 hours
Practical Attachments	28 hours
Total Teaching Time	180 hours
Weightage for assessment	40%

Majority of AHPs' have to perform significant number of tasks related to clinical work and patient handling. Basic understanding of major parts of human anatomy and physiology, and their application will provide a base for them to build their applied knowledge.

2. Rationale

The students will explore human body in order to understand its various systems, major functions performed by these systems and some common disease states affecting them. This knowledge will directly help them in supporting work of the teams of which they are an important part.

The **goal** of this unit is to give a broad understanding of human anatomy and physiology to students so that they are exposed to general functions and structure of the human body using a systems approach. This unit, along with its sub-units, focuses on breadth of the information and knowledge about human body rather than the depth.

3. Scope

Learning and understanding will focus on gross anatomy, major functions of parts of body and how these are altered in certain common diseased states. The scope of teaching will be less than medical and nursing students.

4. Learning Objectives

After completing unit 2 students will be able to:

- a. identify parts of the human body (gross anatomy only)
- b. demonstrate how different parts of human body work and what are their main functions
- c. identify abnormal and generic diseased states on gross appearance.

Sub-unit 3.1 - The Cardiovascular System

1. Time allocation

26 hours of class teaching and 4 hours of practical training

2. Rationale

Students will explore cardiovascular/circulatory system in order to understand its various parts, their major functions and some common diseases affecting the system. In Punjab the pattern of non-communicable diseases has changed over the years. Patients' statistics show that approximately 38% of them seek medical advice from public sector health facilities for non-communicable ailments, almost equal to the number of patients reporting with communicable diseases. Hypertension and related complications therefore make this chapter an essential element of curriculum.

3. Scope

Learning and understanding will focus on gross anatomy, major functions of parts of CVS and how they are affected by diseases. The scope of teaching will be limited to giving a general understanding of CVS to students and developing their skills to measure blood pressure and pulse.

4. Learning Objectives

After completing sub-unit 3.1 students will be able to:

- a. understand components and groups of blood
- b. mark location of the heart on human body and name its coverings
- c. name chambers of heart and describe their functions
- d. trace pathway of blood through the heart
- e. name different types of blood vessels and parts of blood
- f. describe the concept of blood pressure
- g. identify surface veins for administration of intravenous injections
- h. identify key risk factors for developing atherosclerosis and describe conditions associated with atherosclerosis within the coronary blood vessels.

Sub-unit 3.2 - The Digestive System

1. Time allocation

26 hours of class teaching and 4 hours of practical training

2. Rationale

Ailments related to the digestive system such as diarrhea and dysentery form a sizeable portion of workload of health facilities. Outbreaks of gastrointestinal diseases are quite common. Contaminated water supply adds another layer of complexity.

Students will explore Gastrointestinal System (Digestive System) in order to understand its various parts, their major functions and some common diseases affecting the system. Given its importance, a special reference will be made to oral rehydration therapy. Knowledge of anatomy and physiology of the digestive system will prepare students to understand various interventions that they will be using in their professional lives.

3. Scope

Learning and understanding will focus on gross anatomy, major functions of parts of Gastrointestinal System (Digestive System) and how they are affected by diseases. The scope of teaching will be limited to giving a general understanding of the system to students and developing their skills to measure dehydration.

4. Learning Objectives

After completing sub-unit 3.2 students will be able to:

- a. describe gross anatomy of the digestive system
- b. describe basic functions of various parts of the digestive system
- c. mark location of stomach, liver and appendix on human body
- d. identify and recognize signs of dehydration
- e. demonstrate how to guide clients about oral rehydration therapy and hygiene
- f. demonstrate an understanding of relationship of digestive system with food and water in the context of disease generation and propagation.

Sub-unit 3.3 - The Pulmonary System

1. Time allocation

26 hours of class teaching and 4 hours of practical training

2. Rationale

Students will explore the Pulmonary System in order to understand its various parts, their major functions and some common diseases affecting the system. Communicable and non-communicable diseases related to the Pulmonary System form more than a third of the case load of clients reporting at government health facilities. Knowledge of this subject will help AHPs in providing support for effectively managing problems related to this system. Teachers will make a special reference to pneumonia and pulmonary tuberculosis, given the seriousness these carry.

3. Scope

Learning and understanding will focus on gross anatomy, major functions of parts of the Pulmonary System and how they are affected by diseases. The scope of teaching will be limited to giving a general understanding of the system to students and developing their skills to recognize signs and symptoms of tuberculosis and pneumonia in children and the elderly.

4. Learning Objectives

After completing sub-unit 3.3 students will be able to:

- a. describe gross anatomy of the pulmonary system
- b. describe basic functions of various parts of the pulmonary system
- c. mark location of lungs on human body
- d. identify signs and symptoms of pneumonia and pulmonary tuberculosis

Sub-unit 3.4 - The Musculoskeletal System

1. Time allocation

26 hours of class teaching and 4 hours of practical training

2. Rationale

Students will explore the musculoskeletal system and skin in order to understand its various parts, their major functions and some common diseases affecting the system with special reference to fractures and their immediate management. Trauma has emerged as an important health problem. Increased numbers of vehicles on roads and problems related to law and order have contributed to accidents.

3. Scope

Learning and understanding will focus on gross anatomy, major functions of parts of the musculoskeletal system and skin and how they are affected by diseases. The scope of teaching will be limited to giving a general understanding of the musculoskeletal system and skin to students and developing their skills to recognize and manage fractures (first aid) and other related emergencies. Links of musculoskeletal system and skin will also be explored with other systems of the body such as CVS and gastrointestinal tract.

4. Learning Objective(s)

After completing sub-unit 3.4 students will be able to:

- a. demonstrate basic understanding of the musculoskeletal system and skin (What is the Musculoskeletal System? What comprises the system? What are the major functions of the system? What are the functions of its component parts?)
- b. mark location of major parts of the system on human body, e.g. long bones of the body, origin/insertion of muscles of limbs and large joints
- c. identify signs and symptoms of fractures
- d. develop a general understanding of anatomy and physiology of skin and recognize skin ailments such as scabies.

Sub-unit 3.5 - The Nervous System

1. Time allocation

12 hours of class teaching and 3 hours of practical training

2. Rationale

Students will explore the nervous system in order to understand its major parts, their major functions and some common diseases affecting the system. Changing economic, social, cultural and demographic patterns have led to an increased number of cases of trauma and stroke.

3. Scope

Learning and understanding will focus on gross anatomy, major functions of parts of the nervous system and how they are affected by diseases focusing on head injuries and stroke. The scope of teaching will be limited to giving a general understanding of the nervous system to students and developing their skills to recognize signs of head injuries and stroke. Links of the nervous system to rest of the human body will also be explored.

4. Learning Objective(s)

After completing sub-unit 3.5 students will be able to:

- a. name major parts of the nervous system and describe their major functions
- b. identify signs and symptoms of head injuries, spinal injuries and stroke
- c. understand the basis for immediate management (emergency) of head injuries, spinal injuries and stroke.

Sub-unit 3.6 - The Excretory System

1. Time allocation

12 hours of class teaching and 3 hours of practical training

2. Rationale

Changing demography and patterns of lifestyles have increased the incidence of non-communicable diseases in Punjab. Renal failure has become an important disease entity. These factors necessitate inclusion of excretory system in this curriculum. Applied knowledge of various important parts of this system and their important functions will prepare students to effectively support medical teams in managing relevant clients on the one hand and will enable them to deliver health promotion messages effectively to communities, on the other.

3. Scope

Students will explore the excretory system in order to understand its major parts, their major functions and some common diseases affecting the system. Learning and understanding will focus on gross anatomy, major functions of parts of the excretory system and how they are affected by diseases. The scope of teaching will be limited to giving a general understanding of the excretory system to students and developing their skills to recognize emergencies. Links of the excretory system to rest of the human body will also be explored.

4. Learning Objectives

After completing sub-unit 3.6 students will be able to:

- a. describe routes of excretion of wastes products from human body
- b. name major parts of the excretory system and mark their position on human body
- c. describe functions of major parts of the excretory system
- d. identify common diseases affecting the urinary system.

Sub-unit 3.7 - The Reproductive System

1. Time allocation

12 hours of class teaching and 3 hours of practical training

2. Rationale

A relatively closer relationship of AHPs with communities suitably positions them to assume the role of health counselors. This opportunity needs to be fully capitalized upon in order to improve preventive health interventions. As frontline health workers, AHPs need to have knowledge of the Reproductive System in order to deliver health promotion messages including family planning to individuals and communities in addition to dealing with related and family planning.

3. Scope

Students will explore the Reproductive System in order to understand its major parts, their major functions and some common diseases affecting the system. Learning and understanding will focus on gross anatomy, major functions of parts of the reproductive system and how they are affected by diseases. The scope of teaching will be limited to giving a general understanding of the reproductive system to students and developing their skills to recognize emergencies. Links of the reproductive system to rest of the human body will also be explored.

4. Learning Objectives

After completing sub-unit 3.7 students will be able to:

- a. identify major parts of the reproductive system
- b. describe functions of major parts of the reproductive system
- c. identify common disease condition affecting the reproductive system
- d. give health promotion messages related to reproductive health

Sub-unit 3.8 - The Endocrine System

1. Time allocation

12 hours of class teaching and 3 hours of practical training

2. Rationale

Changing lifestyles and demography have increased the incidence and prevalence of non-communicable diseases in Punjab. Diabetes has become an important disease entity. Inclusion of excretory system in this curriculum therefore has become necessary. Knowledge of various important parts of this system and their important functions will prepare dispensers to effectively support health services in managing relevant clients. More importantly, knowledge of the Endocrine System will be enable AHPs to deliver health promotion messages effectively to communities and individuals including those related to hormone-based contraceptives.

3. Scope

Students will explore the Endocrine System in order to understand its major parts, their major functions and some common diseases affecting the system. Learning and understanding will focus on gross anatomy, major functions of parts of the endocrine system and how they are affected by diseases. The scope of teaching will concentrate on giving a general understanding of the endocrine system to students and developing their skills to recognize emergencies. Links of the endocrine system to rest of the human body will also be explored.

4. Learning Objective(s)

After completing sub-unit 3.8 students will be able to:

- a. name major parts of the endocrine system
- b. describe functions of major parts of the endocrine system
- c. identify common diseases affecting the endocrine system
- d. deliver health promotion and family planning (family welfare) messages related to this system.

Unit 4

Quality Assurance and Ethics

1. Learning Focus	
Minimum Service Delivery Standards (MSDS)	3 hours
Patients' Rights	2 hours
Patient Safety – Avoidance of Medical Neglect	5 hours
Possible Hazards in Hospitals – Precautions and Prevention	6 hours
Medical Ethics, Hippocrates Oath	4 hours
Workplace Ethics (gender/ sexual harassment)	4 hours
Class Room Teaching	24 hours
Practical Attachments	10 hours
Total Teaching	34 hours
Weightage for assessment	5%

2. Rationale

Once services are in place, the next logical and important question is the quality of care which cannot be achieved without defining standards. The Minimum Service Delivery Standards (MSDS) accepted by Health Department in 2008 provides the foundation for ensuring quality healthcare delivery. MSDS strive for a need based system of care putting public first and focusing on quality health services. Acclimatizing AHPs with the concept of quality would enable them to strive for maximizing the impact of their services, while abiding by the principles of hospital safety would lead to a safe working environment.

The members of healthcare delivery teams belong to the noblest professions and high moral standards are expected of them. Therefore, they need to learn the norms of behavior in workplace to create conducive working environment for colleagues. They also need to understand the code of professional conduct to enable them to win respect of communities they serve.

3. Scope

Students will learn the concept of quality in the context of MSDS. They will also learn the principles of 'Patient Safety' which aim at avoidance of negligence and elimination of errors. The principles of hospital safety will also be taught to minimize workplace hazards and accidents including: mechanical hazards, heat and light hazards, chemical burns, radiation.

4. Learning Objectives

After completing unit 4 students will be able to:

- i. Realize the rights of patients and understand the mechanism for redressing patients' complaints
- ii. Assure avoidance of neglect and provision of quality care in accordance with the defined standards and protocols
- iii. Appreciate the values and principles of ethics and their significance in the field of medicine

Unit 5

Sterilization and Disinfection

1. Learning focus	
Microorganisms (bacteria, virus, fungi, spores, parasites) & modes of transmission of infections	14 hours
Microbiology & chemistry related to sterilization and disinfection	6 hours
Infection Control Procedures (cleaning, processing, packaging, distributing, storing, and inventory control of sterile goods, instruments, trays & equipment)	12 hours
Blood borne diseases, HIV/AIDS, Hepatitis B & C	6 hours
Class Room Teaching	38 hours
Practical Attachments	10 hours
Total Teaching Time	48 hours
Weightage for assessment	10%

2. Rationale

Concepts and procedures of sterilization and disinfection are the foundational training block which supports the entire edifice of training outcome. Improper sterilization and disinfection could have far reaching hazardous impact on clients, families of clients, communities, health facility staff and health workers themselves.

Sterilization and disinfection start from simple but important aspects such as cleanliness and hand washing and differentiates into technologically complex procedures such as radiation. It is a cross cutting subject which has its application in almost all tasks performed by AHPs whether at hospitals, RHCs and BHUs. Understanding of sterilization and disinfection, and their application therefore becomes essential ingredient of this curriculum.

This unit addresses basic issues related to safety and control of spread of diseases. Understanding of concepts of sterilization and disinfection and learning skills to manage them, therefore forms the essential core of training program.

3. Scope

Students will learn about basics of microbes and how infections are transmitted. They will acquire skills related to personal hygiene and sanitation as well as that of their place of duty.

Emphasis will be on developing demonstrable skills in carrying out disinfection and sterilization. All relevant aspects of Minimum Service Delivery Standards, Standard Operating Procedures and Standard Medical Protocols introduced by Punjab Department of Health will be part of the training package.

The primary goal of this unit would be to train students in understanding the relationship between microorganisms and disease, modes of transmission of disease and how to prevent disease by breaking the chain of transmission.

4. Learning Objectives

After completing unit 5 students will be able to:

- i. describe & demonstrate personal hygiene and hygiene of their work environment
- ii. explain the chain of infection
- iii. describe risk of contracting infection to healthcare professionals
- iv. demonstrate proper hand washing methods
- v. prepare and sterilize instruments
- vi. carry out safe disposal of instruments (syringes, needles, disposable medical/surgical) equipment.

5. Practical learning component

Field learning will be carried out in hospital wards, laboratories, operation theatres, laundries and sterilization rooms. Teachers will ensure that students are given field learning activities that are relevant to the sterilization and disinfection that is being taught in the class. Practical attachment of students with sterilization departments or sections is essential for learning sterilization techniques.

Unit 6

Communication Skills and Health Education

1. Learning Focus	
Communication Process – Verbal & Non-verbal Communication	06 hours
Basic Communicational – Principles & Barriers	03 hours
Interpersonal Communication Skills	03 hours
Characteristics of a Good Communicator	03 hours
Principles of Health Education	03 hours
Class Room Teaching	18 hours
Practical Attachments	06 hours
Total Teaching	24 hours
Weightage for assessment	5 %

2. Rationale

Communication, especially interpersonal communication and health communication, is the vehicle required for effective interaction with both internal and external clients. Communication skills help health professionals develop healthy interpersonal relationships, evaluate mediated messages, and learn to present themselves in effective and competent ways to others. Effective communication is the key to change people's health behavior and acquiring this skill therefore becomes mandatory. Properly trained AHPs will communicate with patients effectively and have an effective influence on patient behavior. They are expected to gain a sense of control over patient's/ individual's condition and treatment and thus develop trust and confidence. Moreover after gaining knowledge the health professionals can contribute towards improved safety, improved quality of care, decreased length of patient stay and improved patient and family satisfaction.

3. Scope

Students will learn about the principles and techniques of effective communication. Lectures will be augmented with practical sessions on interpersonal communications to highlight the communication barriers and the methods of overcoming them. However, detailed planning for organizing a health education campaign will not be included.

4. Learning Objectives

After completing unit 6 students will be able to:

- i. define health education and its importance in daily life
- ii. list out basic elements of effective communication
- iii. describe the role of communicator in the communication process
- iv. identify the characteristics of a good communicator
- v. demonstrate skills required for effective communication

Unit 7

First Aid

1. Learning Focus	
Triage – checking vital signs	4 hours
Wounds and Fractures	4 hours
Hemorrhage	4 hours
Shock	6 hours
Burn	5 hours
Poisoning	5 hours
Heat stroke	2 hours
Insect and animal bites	4 hours
Cardio-pulmonary Support (CPR)	3 hours
Transportation of injured person to hospital	3 hours
Class Room Teaching	40 hours
Practical Attachments	40 hours
Total Teaching	80 hours
Weightage for assessment	20 %

2. Rationale

Increased number of vehicles, rising incidents of violence, natural disasters, cultural & social changes and unregulated sale of drugs have resulted in a proportionate increase in cases of trauma, injuries and drug over-dosage. Recognizing life threatening conditions and learning life saving skills therefore are imperatives for AHPs training.

3. Scope

Students will learn how to recognize life threatening conditions, what are the basic life saving measures and how they are carried out. Emphasis will be on referring such patients following initial life saving measures rather than full management. Students should be given the

understanding that professionalism and ethics demand a properly trained doctor managing such patients rather than AHPs.

Learning emphasis will also be on developing demonstrable skills in carrying out procedures such as keeping a patent airway, recording vital signs, CPR, stoppage of bleeding, shifting/handling patients with head injury, spinal injuries and fractures. All relevant aspects of Minimum Service Delivery Standards, Standard Operating Procedures and Standard Medical Protocols introduced by Punjab's Department of Health will be part of the training package.

4. Learning Objectives

After completing unit 7 students will be able to:

- i. define triage
- ii. record vital signs
- iii. elicit life threatening signs
- iv. demonstrate skills and knowledge to stop bleeding
- v. carry out CPR and manage Airway, Breathing and Circulation (ABC)
- vi. carry out first line handling of patients with suspicion of head or spinal injuries
- vii. carry out first line handling of patients with fractures.
- viii. Understand the concept of Management of Medical and Surgical Emergencies
 - a. Hyper- and Hypo-Glycemia
 - b. Hypertensive crisis
 - c. Cardiac Emergencies
 - d. Bronchospasm
 - e. Acute Abdomen

5. Practical learning component

Field learning will be carried out in hospital wards, trauma centers and casualty wards. Teachers will ensure that students are given learning activities that are relevant to the unit that is being taught in the class. Demonstrations on dummies will form an essential component of practical training for this unit.

Section III

Applied Computer Sciences

Information Technology is gaining increasing importance in diagnostic and therapeutic services. The students will develop a basic understanding of computers working and will gain practical skills for operating them. This will continue throughout the two years duration of this training program. A brief description and definitions of IT terms will be taught to the students. The study will primarily focus on:

- Overview of Computer System
- Words processing
- Internet basics

There will be no formal assessment of this component; however, availability of IT facilities and arrangements for computer training will be essential criteria for affiliation of an institution for training for Allied Health Sciences. 50 hours of class teaching and practical training (in two years) will be allocated for this component.

Recommended Reading for Teachers

1. Ilyas, Shah and Ansari; Community Medicine and Public Health; 5th Edition 2000; Time Publishers, Karachi
2. Minimum Service Delivery Standards – MSDS (2008); Punjab Devolved Social Services Program (PDSSP)
3. Standardized Medical Protocols – SMPs (2008); Punjab Devolved Social Services Program (PDSSP)
4. Text Book for Dispensers (2008), Punjab Medical Faculty with assistance from CIDA – SOHIP
5. General Anatomy by Dr Ghulam Ahmad
6. Essential of Medical Physiology Vol.I & II by Mushtaq Ahmad
7. Essentials or Medical Biochemistry, by Mushtaq Ahmad, Ilmi Book House, Lahore
8. Sterile Products and Aseptic Techniques for the Pharmacy Technician by Mike Johnston and Jeff Gricar
9. Mosby's Laboratory Skills for the Pharmacy Technician by Mosby
10. Workbook and Lab Manual for Mosby's Pharmacy Technician: Principles and Practice by Teresa Hopper BS CPhT
11. Govt. of Pakistan (1994), Health Management Information System for First Level Care facility Staff; An Instruction Manual, Ministry of Health, Islamabad
12. PPSPP, (1996), Contraceptive Technology and Quality Service-Participant's Workbook for Physician, Key Social Marketing, Islamabad
13. W.H.O./UNICEF (1978), Alma Ata Declaration
14. Weinsier, Heimburger & Buttersworth (1989), Handbook of Clinical Nutrition, CV Mosby Company, Missouri.
15. Virtual Library: Medicine-www.ohsu.edu/clinweb/wwwvi.

