



King Edward Medical University

Lahore

POSTGRADUATE EDUCATION
M Phil Program

in

PHYSIOTHERAPY

CONTENT OF THE COURSES

2007

Prologue

by

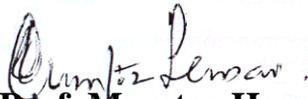
The Honorable Vice Chancellor KEMU

The Program Faculty Committee Members of all M. Phil Programs are guided and assisted in order to enable them to meet the minimum requirements and Standards to be achieved. Only principle areas are addressed giving freedom for the students to raise questions and arguments and for the teachers to include most recent and best guidance literature curriculum contents. It is clear that beyond the main framework there are greater challenges in the areas of selecting modern knowledge, translating information into skills, selecting best pedagogy, teaching in the light of different knowledge levels as determined by Blooms Taxonomy, effective communication, making use of best teaching aids, evaluations, counseling and role modeling. Moreover teachers of Postgraduate M. Phil programs have additional responsibilities of keeping into view the community heeds in terms of health care problems in their respective fields. The students in this modern curriculum have more responsibilities to improve their knowledge beyond textbooks and visit libraries and World Wide Web as frequently as possible. Their logical arguments will serve as the backbone of learning process.

The whole curriculum is divided into semesters to facilitate, knowledge delivery and absorption, more effective. Each semester is further subdivided into modules. This will further make the education process smooth.

I remain confident that both faculty and students would enjoy during this program.

I congratulate Chairman M.Phil Coordination Committee, Professor Dr. Atiya Khalid and his dedicated team members / Program Directors, who have put in lot of hard work to bring these framework guidelines in its present shape.



Prof. Mumtaz Hassan (S.I.)

MBBS (Pb.) B.Sc. (Pb.) MRCP (UK), DTM&H (Edin)
FCPS (Pak.), FRCP (Lond.), FRCP (Edin), FRCP (Glasg.),
FRCP (Ireland), DM (USA), FACP (USA), FACIP (USA),
FCCP (USA), FAFCA (USA)

Vice Chancellor

King Edward Medical University,

Lahore

Prologue

by

The Honorable Pro-Vice-Chancellor KEMU

M.Phil Programs in Basic Medical and Dental Sciences were introduced in Pakistan to create Scientist and Teachers. In absence of PhD programs these programs were equivalent to major qualifications of the Universities. These programs before 2001 were spread over four years, two (2) years of experience of teaching in same subject in recognized medical teaching institution, one (1) year of course work and one (1) year of lab work and research. In 2001 curriculum were revised and all four (4) years were included into the body of the program.

Now PhD programs are promoted, supported, encouraged and funded by Higher Education Commission, largely as M.Phil leading to Ph.D programs, the M.Phil programs are made equivalent to M.Phil in Engineering, Hard Sciences, Biological Sciences and Social Sciences.

The M.Phil programs based on this framework will have duration of two (2) years at postgraduate level (Level 7 according to the European Education Levels) and will be credit based, modularized, Semesterized during first year and research work during second year. The qualification of M.Phil will be “Medium Qualification” according to “PMDC Criteria” and “Masters (M) qualification according to QAA-UK criteria.



Prof. Dr. Syed Muhammad Awais

(Sitara-e-Imtiaz)

M.B.B.S.(Pb), M.C.P.S.(Surg),

M.Sc. Bio-eng. (Dun.), M.S. (Orth)

Pro-Vice Chancellor & Prof. Orthopaedic Surgery,

King Edward Medical University & Mayo Hospital & University,

Lahore.

Prologue
by
The Chairman
M. Phil Program Committee KEMU

M.Phil programs at KEMU not only provide students with an outstanding education but also encourage them to self-directed, theoretical and practical learning. These above mentioned attributes are at the forefront of knowledge in every specialized field that provides a basis for originality in developing and/or applying ideas, often within a research context. The aim of this exercise is to develop conceptual understanding that enables the student; to evaluate critically current research and advanced scholarship in the discipline; and to evaluate methodologies and develop critiques of them and, where appropriate, and to propose new hypotheses.

M.Phil programs at KEMU also recognize and reinforce the ability of students to integrate knowledge and formulate judgments. Students are also directed to take account of social and ethical issues and responsibilities and also reflect experience of managing change in a complex environment. The learning process at this level is associated with independent working with other people at the same level or higher. All feasible efforts will be made by the departments to provide students an opportunity to develop the work or learning according to student's scholastic interest.

During the course of M.Phil training, students will be presented with unfamiliar learning situations and will be required to solve problems that involve many obscure and interacting factors. Many such factors are typically variable, making the learning context complex and unpredictable. The overall impact of these exercises is to; ensure a highly specialized education and its application in problem solving to ensure access to employment requiring decision-making in complex and unpredictable situations and Nurture independent learning ability required for continuing professional development Career progression within the respective field.

Prof. Atiya Khalid
Chairman,
M.Phil Coordinator Committee

FOREWORD

The King Edward Medical College, Lahore, is oldest and the most prestigious seat of learning, not only in Pakistan but also in whole of the region. This College of elevated to the status of University in 2005

The University runs courses of Undergraduate Education, Postgraduate Diploma Courses, Postgraduate Degree Courses and Ph.D. Courses in Faculty of Medicine and Dentistry.

It gives me great pleasure to appreciate the hard work done by the Chairman, M.Phil “Coordination Committee” of King Edward Medical University, Lahore, and assistance that was extended by the members of the Coordination Committee in revising the Curriculum of M.Phil Programs.

I wish success to the Faculty of the King Edward Medical University, Lahore, in running these new curriculum and welcome new candidates on these modern courses.

Prof. Syed Muhammad Awais
Program Director
M.Phil Physiotherapy
King Edward Medical University,
Lahore

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Introduction

King Edward Medical University (KEMU) is committed to excellence in promoting biomedical education at all levels and has robust programs at both undergraduate and postgraduate levels. KEMU has the distinction of being the first institute in the country to offer an M.Phil program in Physiotherapy. KEMU has philosophy of not only enhancing the depth of knowledge of its students but also the breadth. Therefore during the first semester students will be required to take some multidisciplinary classes, which are compulsory for all M.Phil Students regardless of their area of specialization. Following is the content of the courses of the M.Phil program in Physiotherapy , which is offered through Physiotherapy department.

M. Phil Physiotherapy Program Faculty

- Prof. Dr. Syed Muhammad Awais ... Director M. Phil Program,
- Shahid Ahmed Heera Course coordinator M Phil program,
- Regular Faculty;
 - Basic Sciences;
 - Anatomy;
 - Prof. Dr Atiya Khalid,
 - Dr. Tauqeer Ahmad,
 - Dr. Rafea Tafweez,
 - Dr. Nadia Tazeem,
 - Physiology;
 - Prof Dr Muhammad Akram,
 - Dr. Mehar un Nisa
 - Dr. Muhammad Tahir
 - Biochemistry;
 - Prof Kamran Aziz,
 - Dr Muhammad Nasrullah
 - Pathology;
 - Prof. Muhammad Munir
 - Prof. Samina Naeem
 - Dr. Ahmed Syndicate
 - Clinical Sciences;
 - Medicine;
 - Prof. Mushtaq Haroon
 - Prof. Irshad Hussain Qureshi
 - Surgery;
 - Prof. Dr. Syed Muhammad Awais,
 - Prof. Dr. Tariq Sohail
 - Physiotherapy & Rehab Sciences;
 - Shahid Ahmed Heera MPT (Musculoskeletal),
 - Mudassar Ahmed M.Sc. (Physiotherapy)
 - Basit Mahmood MPT (Musculoskeletal),
 - Riaz Ahmed Joia..... Sydney Australia
 - Muhammad Salabat Khan, ZMUH, Karachi
 - Muhammad Arif Khan, PCB, Quetta

- Research Methodology;
 - Prof Dr Syed Muhammad Awais,
 - Mr. Asif Hanif
 - Mr. Asim Butt

- Management Sciences;
 - Mr Sajid Ali Khan, Management consultant,
 - Mr Naveed ul Iftikhar, Management consultant,
 - Dr. Rashid Mahmood Roofi

- Behavioral Sciences;
 - Mrs. Tanvir Nasr
 - Mrs. Robina Mehmood

Program Outline

Duration of the Program: 02 Years (Full Time)
Entry Qualifications: BS Hons / BSc + additional one year degree course; In Physiotherapy. (minimum 16 years of education).

Entry Procedure; GRE Type Entry Test (MCQ Based)
 Written Test at Faculty of Basic Sciences Level
 Interview at Department of the Program Level

Phase of Studies in Basic Curriculum:

Entry



Year 1	Semester 1 (18 weeks)	Semester 2 (18 weeks)
	Semester Evaluation (02 weeks)	Semester Evaluation (02 weeks)
	Comprehensive Evaluation (02 weeks)	
Year 2	Research & Dissertation (Lab. Work) 48 weeks	
	Project Synopsis Writing (4 weeks)	
	Research Project (42 weeks)	
	Dissertation Defense (02 weeks)	

Exit



Year 1 is divided in two Semesters of twenty (20) weeks each whereas year two (2) is annual of forty eight (48) weeks. Each module and the whole program are made credit based according to the following criteria.

Credit Accumulation and Transfer System (CATS)

As defined by European Credits Transfer system, the CATS – KEMU is defined as follows

1. Contact Hours 1500 – 1800 hrs/year
2. 25 – 30 Contact Hours = 1 Credit Point
3. Number of Credit Point Required in a Year = 60
4. Number of Credit Point Required in a Semester = 30

Curriculum Outline and Learning Schedule

First Year

First Semester (January 15th – May 28th):

Teaching	18 weeks
Review and Evaluation	02 weeks
Total	20 weeks

Summer Recess (May 29th – July 30th)

Second Semester (August 1st – December 20th):

Teaching	18 weeks
Review and Evaluation	02 weeks
Total	20 weeks

Winter Recess (December 21st – January 14th)

Second Year

January 15th – December 20th

Teaching / Lab Work	46 weeks
Dissertation Defense	02 weeks

Class Schedule

Module No	701	702	703	704	705	706
Duration	2 weeks	2 weeks	2 weeks	2 weeks	5 weeks	5 weeks
Title of Module	Orientation, & Assessments in Physiotherapy	Research Methods & Biostatistics	Molecular Biology & Genetics	Basic Science	Biomechanics, Ergonomics, orthotics & prosthetics	Assessments clinical decision making and control of moments
Module Coordinator	Shahid Ahmed Heera	Prof. Syed Muhammad Awais	Prof. Fridoon	Prof. Muhammad Akram	Prof. Syed Muhammad Awais	Shahid Ahmed Heera
Place of Learning	Department Lecture Room	Patiala Block	Patiala Block	Department Lecture Room	Orthopedic lecture hall	Department Lecture Room

Course Content

Semester I

Module 701 Introduction to Physiotherapy (3 Credit Hours)

Course Description and Learning Objectives:

- This course is designed to introduce both classical and contemporary topics in Physiotherapy to the students.
- After taking this course students will be expected to have a basic understanding of Physiotherapy, assessments, interventions, and procedures.

Course Contents:

- Physiotherapy what **does** it means,
- POMR, SOAP test formats,
- Regional assessments,
- Gait analysis,
- Special examinations,

Seminar Topics:

- Developing Evidence Based Approach in Practice
- New Trends in Physical Therapy Rehabilitation

Books Recommended:

1. Rehabilitation Specialist, Rothstein, Jules M, 2nd edition; Philadelphia, Pa. : F. A. Davis, 1997
2. Writing SOAP notes.....APTA,

**Module 702 BIostatistics, RESEARCH METHODS AND
EPIDEMIOLOGY**

Module on Biostatistics and Research Methodology

MODULE DIRECTOR: **Prof. Dr. Syed Muhammad Awais**

MODULE COORDINATORS: **Asif Hanif & Asim Butt**

1.1 FACULTY

1. Prof. Dr. S M Awais
2. Prof. Dr. Hanif Mian
3. Prof. Dr. Athar Khan
4. Dr. Munir Akhtar Saleemi
5. Dr. Muhammad Yaaqoob
6. Mr. Mirza Rizwan Sajid
7. Mr. Asim Butt
8. Asif Hanif

**2. DISTRIBUTION OF WEEKS, CONTENT HOURS AND CREDIT
POINTS**

TEACHING METHODOLOGY	DURATION	CONTACT HOURS	
Research Methods	4 days	20 hrs	Credit Hrs (3)
Pop-Statistics	8 days	40 hrs	
Epidemiology	2 days	10 hrs	
SS + Practical Training	2 days	10 hrs	
Total	days	80 hours	

3. INSTRUCTIONAL OBJECTIVES OF THE COURSE

To enable students to formulate ideas that can be tested in a scientific manner

To give basic understanding of epidemiological methods and biostatistics

To develop the critical faculties of students to evaluate their own and other people's work

To develop skills for the study protocols and applications for research funding.

To learn how to; select a study design/writing grant proposal/research synopsis/thesis writing and research paper publication.

To learn the use of computers for word processing, database manipulation, use of spreadsheets, statistical analysis, preparation of slides, internet communication and video conferencing and report writing.

4. CURRICULUM CONTENTS

4.1. Research Methods and Ethics (4 days)

1. Philosophy, language, types and structure of Research
2. Conceptualizing research, problem formulation, research objectives
3. Biomedical ethics
4. Review of literature, sources of knowledge
5. Survey and types of surveys
6. Types of research
7. Importance of pilot study
8. Designing Questionnaires

4.1.1 Study Designs

1. Descriptive Studies
2. Analytical Studies

4.2. Biostatistics (8 days)

4.2.1 Descriptive Statistics

1. Vital Statistics (Rates and ratios)
2. Organizing, summarizing and displaying data (using graphs, single value and tables also)
3. Variables and types of variable
4. Nature of Data
5. Measure of central tendency and dispersion
6. Confidence Interval
7. Types of Sampling
8. Selection of appropriate descriptive Statistical Techniques
9. Interpretations of results
10. Introduction to Design, Types of Designs

4.2.2 Inferential Statistics:

Concept of: Hypothesis, Level of significance and Significance value (p-value)

Null Hypothesis Testing using t-tests and Chi-Square

Use of Parametric and Non-parametric methods

Simple and Logistic regression

Correlation

4.3. Epidemiology (2 days)

Descriptive and analytical epidemiology, (Surveillance

Quantifying disease in populations

Comparing disease rates

4.4. SPSS 11.5 (3 days)

1. Introduction to SPSS
2. Various file types in SPSS
3. Creating and saving a data file in SPSS

4. Performing simple statistical analysis by using SPSS
5. Transforming a variable in SPSS
6. Graphs in SPSS
7. Advanced Uni- variate and Bi-variate Analysis in SPSS
8. Calculating the significance value

Module 703

Molecular Cell Biology (3 Credit Hours)

Course Description and Learning Objectives:

- This course is the second in the series of two courses designed to introduce both classical and contemporary topics in biology to the students.
- This course is structured to entertain students irrespective of their major.
- After taking this course students will be expected to have a basic understanding of the following fundamental concepts
 1. The role of cellular and molecular biology in medicine.
 2. Immunology.
 3. Molecular and cellular developmental biology ("miracle of life" formation of a complex organism from a single cell).
 4. Evolution with a molecular perspective (natural force and their effect in transformation of life).

Course Contents:

1. Recombinant DNA and Biotechnology
2. Molecular Biology and Medicine
3. Natural Defenses against Disease
4. Differential Gene Expression in Development
5. Animal Development: From Genes to Organism
6. Development and Evolutionary Change
7. The History of Life on Earth
8. The Mechanisms of Evolution
9. Species and Their Formation
10. Reconstructing and Using Phylogenies
11. Molecular and Genomic Evolution

Seminar Topics:

- Genes and Development
- Recombinant Biotechnology
- Molecular and Genomic Evolution
- Molecular Evolution
- Molecular Immunology

Book Recommended:

1. Life, 'The Science of Biology' by Craig Heller

MODULE 704

BASIC MEDICAL SCIENCES

Duration: 2 weeks

Credit hours: 3

Learning Objectives:

This is a multidisciplinary course that in two weeks gives students' basic knowledge of the five pillars of basic medical sciences i.e. Anatomy, Physiology, Pathology, Biochemistry, and course Pharmacology. Students taking this course will be able to understand following;

Anatomy

- Differentiation of structure and function during human development.
- Molecular and genetics aspects of cell.

Physiology

- Cell, Blood, Nerve & Muscle, CVS,
- Respiratory system
- GIT, Kidney, Endocrine and CNS.

Pathology

- Understand the molecular and cellular basis of diseases.
- General Microbiology including modern sterilization techniques.
- Recent advances in the diagnosis of disorders of red cells, white cells and Hemostasis.
- Basic principles of Chemical Pathology and quality control.

Biochemistry

- Basic Perception in Fluid & Electrolyte Balance / Acid Base Balance in Clinical Scenarios.
- Scientific Perception in Modern Nutrition & Associated Problems.
- The strategies & perceptions in Genetic Engineering.
- Appreciation of Diagnostic Biochemical Technology & Proteome Crosstalk.
- Evaluation of Enzymic Strategies in Clinical Scenarios & Basic Metabolic Functions.

Pharmacology

1. Pharmacology and its branches like pharmacokinetics, pharmacodynamics Pharmacogenetics and drug screening.
2. Physiological anatomy of central nervous system, Autonomic nervous system and the effects of the drugs on neurotransmitters will be highlighted.
3. Principles of chemotherapy the classification and mechanism of actions Of various therapeutic agents will be described.

MODULE 705

BIOMECHANICS, ERGONOMICS, ORHTOTICS, & PROSTHETICS.

Duration: 5 weeks

Credit hours: 8

Unit II: Ergonomics

Task Analysis Theory And Practice
Working Postures
Workplace Design
Health and Safety
Ergonomics and the management of RSE in the workplace,
Evaluation of seating,
Load Handling

Unit I: Biomechanics

Introduction to biomechanics,
Introduction to disability, impairment, and handicap,
Biomechanics of tissues and structures of skeletal system ,
Biomechanics of bones,
Biomechanics of articular cartilages,
Biomechanics of tendons and ligaments,
Biomechanics of pheripharl nerves and spinal nerve roots,
Biomechanics of skeletal muscles,
Biomechanics of joints,
Knee,
Hip,
Foot and ankle,
Lumber spine,
Cervical spine,
Shoulder,
Elbow,
Wrist and hand,
Applied biomechanics,
Introduction to biomechanics of fracture fixation,
Biomechanics of arthroplasty,
Engineering approaches to standing, sitting, and lying,
Biomechanics of gait (normal & abnormal),
Ergonomics study for prevention of biomechanical injury to joints.

Unit III: Orthotics

- General concepts,
- Lower Limb Orthosis,
- Spinal(Trunk) Orthosis,
- Upper Limb Orthosis,
- Physical Therapy Interventions

Unit IV: Prosthetics

- General concepts,
- Lower limb prosthetics devices,
- Upper limb prosthetic devices,
- Physical therapy interventions,

MODULE: 706

ASSESSMENT, CLINICAL DECISION MAKING, & CONTROL OF MOVEMENTS

DURATION: 5 WEEKS

CREDIT HOURS: 8

Unit I: Assessments

1. Assessment,
 - a. POMR,
 - b. SOAP,
 - c. Assessments of
 - i. Hip & Shoulder,
 - ii. Knee & Elbow,
 - iii. Ankle, Foot & Hand And Wrist,
 - iv. Cervical spine,
 - v. Thoracic Spine,
 - vi. Lumber Spine,

Unit II: Clinical Decision Makings

1. **Clinical Decision Makings,**
 - d. Selecting Validated Outcome Measures

Unit III: Control of movement

1. **Control of Movement**

Historical introduction to motor control,
Muscles & proprioceptions,
Integeration in the spinal cord,
Corticospinal system,
Cerebral cortex,
Basal ganglia,
Cerebellum,
Posture & locomotion,
Modeling movement disorders,
Motor learning,
Overview of motor control,

Year 1 Semester 2

Class Schedule

Module No	707	708	709	710	711	712
Duration	3 weeks	2 weeks	4 weeks	2 weeks	4 weeks	3 weeks
Title of Module	Exercise Physiology And aerobic trainings,	Managements	Exercise rehabilitations	Pain & psychology	Role of Physical agents in physiotherapy	Rheumatology & Immunology
Module Coordinator	Prof. Kamran Aziz	Dr. Rashid Mahmood	Shahid Ahmed Heera	Madam Robina Mehmood	Shahid Ahmed Heera	Prof. Sajid Obaid Ullah

MODULE: 707

EXERCISES PHYSIOLOGY AND AEROBIC TRAINING

DURATION: 3 WEEKS

CREDITS HOURS:

Unit I: Introduction

- **Muscle morphology,**
- Activation and relaxation **of skeletal** muscle,
- Mechanical properties and cross bridge **theory,**
- Energy supply for muscle contractions,
- Muscle mechanics and **related** theories,
- Muscle fatigue,
- Architecture of muscle & its influence **on** function,
- Effect of **resisted** and **aerobic** training,
- Fibre types, structure and function,
- Determinent of strength and weakness in humans,
- Physiology of muscle,
- **Soft tissue** injuries,
- Force and emg measurments,
- Muscle tone **and flacidity**

Unit II: Exercise Physiology

- 1. Energy, metabolism, work and power,**
 - a. An introduction to exercise physiology,
 - b. Exercise: a challenge of homeostatic control,
 - c. Metabolism,
- 2. Special topics within exercise physiology,**
 - a. Growth , development, aging and exercise,
 - b. Exercise in different envoinments **and age groups**
 - c. Gender and exercise performance,
 - d. Exercise, health and disease prevention,
 - e. Clinical exercise physiology in rehabilitation,
- 3. Systemic response to exercise,**
 - a. neuromuscular function and **neuroplasticity,**
 - b. metabolic adaptation to exercise,
 - c. cardiovascular **responces** to exercise,
 - d. **VO_{2peak} and pulmonary compliance,**
 - e. endocrine adaptation **to** exercise,

4. Measurement of exercise,
 - a. Aerobic training, conditioning exercises and resistance training
 - b. Exercise tolerance
 - c. VO_{2peak}
 - d.
5. Performance,
 - a. ergogenic aids,
 - b. ergogenic and calorimetry,
 - c. measuring endurance and anaerobics,
6. Methods to Improve Exercise Performance,
 - a. training for sports and performance,
 - b. resistance exercise and muscular strength,
 - c. exercise nutrition.

SKILLS:

1. Exercise health and disease preventions,
2. Adaptation to exercise,
3. Exercise in different environments,
4. Gender and exercise performance,
5. Clinical exercise physiology and rehabilitation,
6. Ergogenic aids,
7. Ergometry and calorimetry,
8. Measuring endurance and aerobic capacity,
9. Training for sport and performance,
10. Exercise nutrition,
11. Resistance exercise and muscular strength.

MODULE: 708

MANAGEMENT FOR PHYSIOTHERAPIST,

DURATION: 2 WEEKS,

CREDIT: 3Az

1. Personal Management,

- a. Mapping of life,
- b. Emotional intelligence,
- c. Self esteem,
- d. Career management,
- e. Stress management,
- f. Communication skills,
- g. Task achievement,
- h. Public relations,
- i. Group management,

2. Professional and medical ethics,

- a. Environments,
- b. Medical records,
- c. Department / personnel management,
- d. Fiscal managements,
- e. Quality assurance,
- f. Care giver definitions,
- g. Illegal practice and malpractice,
- h. Code of ethics,

3. Ethical Aspects of Physical Therapy,

- a. Introductions,
- b. Moral dilemmas and moral principles,
- c. Rights and obligations,
- d. Health care organizational rights and obligations,
- e. Employee rights and obligations,
- f. Patients / clients obligations,
- g. Professional issues,

4. Managing people: Organizational Behaviour:

- a. changing physical therapy environment,
- b. human development theories,
- c. management theories related to managing people,
- d. recruitment and retention,
- e. supervisory relationship,
- f. social and moral norms,
- g. men and women in organization,

5. Marketing in Physical Therapy,

- a. marketing research planning,
- b. defining the problem,
- c. opportunities and objectives,
- d. marketing research,
- e. marketing in physical therapy,

6. Hospital Management,

- a. hospital, roles, planning, design, in door and out door services,
- b. management; effectiveness, statistical analysis, evaluation,
- c. functional hospital organization,
 - i. Customer services,
 - ii. Ethical and legal aspects,
 - iii. Disposal of waste.

MODULE: 709

EXERCISE REHABILITATIONS,

DURATION: 4 WEEKS

CREDITS: 6

Cover a wide range of skills for the treatment of musculoskeletal dysfunctional based on through procedure for examination, assessment and diagnosis. The course unit includes:

Unit I: Introduction

1. Examination profiles of the students,
2. Dynamic and passive palpation of the joint,
3. Ruling out contraindications to manipulations,
4. Patients studies, differentiations of culprit tissues,
5. Functional anatomic and biomechanics of;
 - a. Foot and knee complex,
 - b. Hip pelvis lumber spine complex,
 - c. Thoracic, and mandibular joint,
 - d. Shoulder complex,
 - e. Elbow and hand complex,
 - f. Nervous system including study of individuals,

Unit II: Musculoskeletal Manual Rehabilitations

Unit III: Neurorehabilitations

Unit IV: Cardiopulmonary Rehabilitations

UnitV: Sports Traumatology & Rehabilitations

MODULE: 710

Pain , Psychology & Psychiatry

DURATION: 2 WEEKS

CREDITS: 3,

Unit I: Pain

1. PAIN:

- a. Natural history of pain
- b. Acute pain,
- c. Chronic pain,
- d. Cutaneous pain,
- e. Pain and inflammations,
- f. Pharmacology of pain control,
- g. Higher centers and descending controls,
- h. Relationship between pain and damage in skeletal muscles,
- i. Visceral pain,
- j. Reflex sympathetic dystrophy,
- k. Psychological models of pain,
- l. Psychological treatment of pain,
- m. Clinical aspects of pain management,
- n. Intractable pain,

2. SEMINARS AND PRACTICALS

- a. Itch and pain,
- b. Spinal
- c. Mechanism underlying pain,

Unit II: Psychology

1. PSYCHOLOGY;
 - d. History taking,
 - e. Mental state examination,
 - f. Interview types and skills,
 - g. Lap port building (therapist – patient relationship)
 - h. Learning,
 - i. Motivation,
 - ii. Perceptions,
 - iii. Intelligence (multiple intelligence)
 - iv. Emotions,
 - v. Personality,
 1. types,
 2. traits,
 3. development
 - vi. memory,
 - vii. stress, coping mechanisms and stress management,
 - viii. crises interventions,
 1. Death,
 2. dying,
 3. bereavement,
 - ix. Psychopathologies of
 1. infancy,
 2. childhood,
 3. adulthood,
 4. and old ages (geriatrics),
 - x. psychological considerations in dealing with handicapped patient.
 - xi. Treatment models,
 1. Bio psycho social models,
 2. psychopharmacology,
 3. psychotherapies,
 - a. supportive therapy,
 - b. cognitive therapy,
 - c. behavioral therapy,
 - d. relational emotion, behavioral therapy,
 - xii. Social factors,
 - xiii. Anxiety, depression, schizophrenia, bipolar,

Practical:

- Two case studies,
- History takings,
- Interviews,

Unit III: Psychiatry

MODULE: 711

PHYSICAL AGENTS IN PHYSICAL THERAPY

DURATION: 4 WEEKS

CREDITS: 6,

1. Introduction
 - a. Definitions and examples,
 - b. Categories,
 - c. Role of physical agents in patient care,
 - d. Role of physical agents in rehabilitation,
2. Thermal agents,
 - a. Physical principle of thermal energy,
 - b. Specific heat,
 - c. Modes of transfer,
3. Cryotherapy –cold,
4. thermotherapy,
5. choosing between cold and heat,
6. hydrotherapy,
7. traction and compression
 - a. Traction,
 - b. Compression,
8. ultrasound,
9. ultraviolet rays,
10. laser,
11. diathermy,
12. electrical currents,
13. clinical case studies,
14. selecting the ideal physical agent for patient treatment,
15. areas of future research in physical agents,
16. thermal agents commonly used in physical therapy,
17. electrotherapy,
18. electroneuromyography,
19. sonic modalities,
20. hydrotherapy,
21. cryotherapy,
22. radian modalities,
23. mechanical agents,

MODULE: 712

RHEUMATOLOGY AND IMMUNOLOGY

DURATION: 3WEEKS,

CREDITS: 4,

Unit I: Immunology

1. IMMUNOLOGY,
 - a. Immunity,
 - b. Physiology and histological characteristics of connective tissues,
 - c. Inflammation and repair,
 - d. Types and structures of joints,
 - e. Auto immunity, cellular and muscular basis,
 - f. Clinical syndrome of auto immunity,
 - g. Types of arthritis,
 - h. Inflammatory,
 - i. Non inflammatory,
 - j. Immunological injury,
 - k. Interaction of cells and tissues,
 - l. Understanding inflammation & repair,
 - m. Joint structure, synovium, properties of tissues,
 - n. Autoimmunity, genes, antibiotics. T cell receptors,
 - o. Clinical autoimmunity,
 - p. Diseases and their treatment,
 - q. Mechanisms of damage,
 - r. The role of adhesion molecules, enzymes, cytokinesis,
2. IMMUNOLOGY EVALUATION,
 - a. Immunity classification and types,
 - b. Cellular and molecular components
 - c. Mechanism and type of auto immunity,
 - d. Clinical syndrome of auto immune disease,
 - e.

Unit II: Rheumatology

1. RHEUMATOLOGY

A) Rheumatoid Arthritis (RA) & Juvenile Rheumatoid Arthritis (JRA)

B) Spondyloarthropathies

- a) Ankylosing Spondylitis (AS)
- b) Psoriatic Arthritis
- c) Reiter's Syndrome
- d) Reactive Arthritis
- e) Ulcerative Collitis
- f) Becheet's Syndrome
- g) Whipple's Disease

C) Degenerative Arthropathies

- a) Osteoarthritis
- b) Spondylosis
- c) Spondylolisthesis
- d) Spondylolysis

D) Crystal Arthritis

- a) Gout
- b) Pseudogout

D) Infective Arthritis

- a) Rheumatic fever
- b) Septic Arthritis
- c) Tuberculous Arthritis

E) Haemophilic Arthritis

F) Connective Tissue Diseases

- i) Poly arteritis Nodasum
- ii) Scleroderma
- iii) SLE
- iv) Polymyalgia Rheumatica
- v) Dermatomyositis

G) Chronic Muscle Pain Syndrom

- 1. Fibromyalgia,
- 2. Myofacial pain syndrom

Year Two

<p>Research & Dissertation (Lab. Work) 48 weeks Project Synopsis Writing (4 weeks)</p>
<p>Research Project (42 weeks)</p>
<p>Dissertation Defense (02 weeks)</p>

Technical Standards/Requirement of M. Phil Program

To ensure graduate education of an excellent caliber M.Phil programs the following guidelines

1 Entitlement, Responsibilities & Eligibility

1.1 Student Entitlement to the Study and Research Amenities:

- a) Students will be provided an environment that is conducive to their scholarly activities.
- b) Students will be provided sufficient materials and supervision to ensure timely completion of their studies and research.
- c) Students will be given access to the entire relevant faculty for guidance and advice.
- d) Students will be entitled an access to computer and internet facilities to aid their studies and research.

1.2 Responsibilities/Eligibility of the M.Phil Supervisor:

- a) The supervisor will himself hold an M.Phil, an equivalent or a PhD degree and three years of research experience.
- b) Supervisor will ensure that his/her students are provided their entitled amenities.
- c) Supervisor will ensure that his/her students are provided sufficient materials and supervision to ensure timely completion of their studies and research.
- d) Supervisors will prepare a yearly progress report; the report will account the Educational Standards that were achieved and overall health of the M.Phil program listing any impediments and their possible solutions. This report will be submitted to the director M.Phil program.
- e) Consider a graduate student as a "junior colleague in research".
- f) Work with the student to establish the supervisory committee as soon as possible after the commencement of the program, and ensure that it maintains contact and formally meets with the student at least once a year.
- g) When going on leave or during an extended period of absence, ensure that the student is adequately supervised by the provision of an acting supervisor (who should be a member of the supervisory committee),
- h) Ensure that the student is aware of his/her guidelines (as listed below), and when necessary, assist the student in meeting them; and

1.3 Program of studies and progress report:

- a) The period of completion of M.Phil Program shall be counted from the date of registration.
- b) The minimum period of completion of M.Phil program shall be two years.
- c) Candidates from Scientific Research Organization after the completion of their course work may carry out their experimental work in their parent laboratory on the recommendation of the Supervisor and with the approval of the Board of Studies/Faculty Council, at the time of approval of the synopsis (for guidelines for preparation of synopsis see Annexure I).
- d) A M.Phil student shall be required to pass a comprehensive examination written/oral at the completion of first year.

- e) After passing the comprehensive examination, but before the submission of his thesis, M.Phil student will give one seminar on the topic relevant tot his field of Research.

Annual Program Report:

The supervisor/s of a M.Phil student shall submit a detailed report by 31st December each year on the progress of the student for the consideration of the advanced studies and Research Board.

2 Evaluations

- 2.1 Evaluations help to measure effectiveness of a learning program. It uses assessment and validation tools to provide data for the evaluation. Assessment is the measurement of the practical results of the training in the work environment; while validation determines if the objectives of the training goal were met.
- 2.2 The term "evaluation" refers to continuous assessment, tests and examinations conducted at the end of a module, clinical clerkship or a stage of the curriculum.
- 2.3 Evaluation is used as a tool for improvement in learning as well as for certification i.e. student's performance is reviewed with them as an aid for learning.
- 2.4 The faculty assesses understanding of concepts rather than memorization of facts, application of knowledge, competence in practical and clinical skills and appropriate professional behavior.
- 2.5 Evaluation of students conducted at the end of the modules and rotations, includes components from continuous evaluation during the modules. The purpose is to utilize continuous evaluation for assisting learning through early awareness of student's strengths and weaknesses of knowledge, skills and attitudes. Continuous assessment is also used for eligibility to sit in the Final Examination.
- 2.6 Any student identified as having academic difficulties should be assessed in depth by appropriate faculty.
- 2.7 Students should be evaluated by an External Examiner for all certifying examinations.

3 Scoring and Grading System

- 3.1 A grade in education means either a teacher's evaluation of student's work or a student's level of educational process. In other words we can say that the performance of a student in a given module is made through continuous valuation. Grades are allocated to a student according to his/her performance in a module.
- 3.2 Grade ranking is required to be reflective of the various examinational performances. It is the predictive character of grades, which determines the institutional reputation. Grading reflects the individual's standing in his group.
- 3.3 In M. Phil. Thesis, Research Projects, Dissertation and Reports will be evaluated by the under mentioned grading scales.

Percentage Marks	Description
80 and above	Distinction
60 – 79	Satisfactory
Below 60	Unsatisfactory

GPA System

4 Grade Point Value

The numerical value assigned to a grade letter is known as grade point value.

Percentage Marks	Letter Grade	Grade Point Value	Description
90 and above	A+	4.0	Exceptional
85 – 89	A	3.70	Out Standing
80 – 84	B+	3.30	Very Good
75 – 79	B	3.00	Good
70 – 74	B-	2.70	Average
65 – 69	C+	2.30	Satisfactory
60 – 64	C	2.00	Pass
55 – 59	C-	1.70	Low Pass
50 – 54	D	1.00	Barely Passing
Below 50	F	0.00	Fail

- 4.1 Maximum possible Grade Point Average is 4.00.
- 4.2 Minimum Grade Point Average of obtaining M.Phil. Degree is 3.0.
- 4.3 A fraction of mark in a module is to be counted as '1' mark e.g. 64.1 or 64.9 is to shown as 65.

5 Progressions

- 5.1 All students are required to achieve at least 50% marks in each module and GPA 3.00 and have attended 80% of the delivered lectures and practical separately in each module at the end of semester-I for progression to the semester-II.
- 5.2 If a student fails to achieve 50% marks in any module assessment in any semester will be allowed **ONE** chance availed or un-availed to pass the failing module/s in Special Make-up Test/s.
- 5.3 If a student has obtained at least 50% marks in all modules but obtains GPA of 2.00 or more but less than 3.00 in any semester will be allowed to appear in Special Make-up test in Module/s with less than 3.0 Grade Point Value but more than or equal to 2.0 Grade Point Value for the improvement of GPA in **ONE** Chance availed or un-availed.
- 5.4 If a student who fails to secure GPA 2.00 at the end of any semester shall be automatically dropped from the rolls of the university.
- 5.5 All students are required to achieve at least 50% marks in each module and GPA 3.00 and have attended 80% of the delivered lectures and practical separately in each module at the end of semester-II.
- 5.6 A student who has passed semester-I and semester-II shall be eligible to

- Appear in Comprehensive Examination at the end of year one.
- 5.7 The scripts of Mid Semester Examination and Final Semester Examination of Semester-I and Semester-II shall be shown to the students by the teacher concerned however these scripts will be taken back after student has viewed them. The Department concerned shall keep such record for one year.
 - 5.8 The teacher shall send the award list to the Chairman/Director/Principal of the Department to the Institute/Center/University who will forward it to the Controller of Examinations and a copy to Dean.
 - 5.9 Any student, who is incapacitated because of illness, a suffering from severe affliction or has other compelling reasons, may apply for Special Make-up Test for the missed examinations of any module to the Head of the Department under intimation to the Controller of Examinations within five working days of the last date of missed examination with documentary proof.
 - 5.10 In case of illness, he/she should submit medical certificate counter signed by the University Medical Officer.

6 Comprehensive Examination

- 6.1 Student admitted to the M.Phil. shall take Comprehensive Examination after the first academic year.
- 6.2 The Comprehensive Examination will cover course work of all modules of the program taught during the academic year. The Examination will test student's ability to integrate and assimilate the knowledge obtained from the course, seminars and independent studies.
- 6.3 Controller of Examinations shall appoint Examiners for the Comprehensive Examination on the recommendation of the "M.Phil. Program Coordination Committee".
- 6.4 A student who obtains at least 50% marks in each paper with GPA 3.00 will pass Comprehensive Examination.
- 6.5 A student who fails to achieve 50% marks in any paper will be given **ONE** Chance availed or un-availed to pass the failing paper/s in the Re-sit Examination on the recommendation of his/her supervisor and M.Phil. Program Coordination Committee.
- 6.6 A student who has obtained at least 50% marks in all papers but obtains GPA of 2.00 or more but less than 3.00 in Comprehensive Examination will be allowed to appear in the Re-sit Examination in paper/s with less than 3.0 Grade Point Value but more than or equal to 2.0 Grade Point Value for the improvement of GPA in **ONE** chance availed or un-availed on the recommendation of his/her supervisor and M.Phil. Program Coordination Committee.
- 6.7 The registration of an M.Phil student shall be deemed as cancelled if he/she does not pass the Comprehensive Examination even in the second attempt.
- 6.8 The syllabus for the Theory, Practical/Viva Voce Papers will be defined by the concerned department.

6.8.1 Papers of the Comprehensive Examination

Panel of Examiners; One Internal and one external in each program.

Theory Papers	Two (02)
Marks	100 Each Paper
Composition of Each Paper:	
MCQ	25%
Short Essay Questions	50%
Long Essay Questions	25%
Practical / Skills	100 Marks
Viva Voce Examination	100 Marks
Total Marks (Theory + Practical + Viva Voce Examination) =	
200 + 100 + 100 = 400	

6.8.2 Final Award

Log Book. (Record & Assignments);	10%
Internal Assessment (Semester Evaluations)	40%
Comprehensive Examination	50%
<hr/>	
Total	100%

The Final obtained marks will be translated into grades and Grade points.

7 Dissertation For M. Phil. Degree

- 7.1 Dissertation shall be a compulsory requirement for M.Phil. Degree.
- 7.2 A candidate who qualifies the Comprehensive Examination may be allowed to prepare his/her research synopsis for M.Phil. Dissertation.
- 7.3 The synopsis shall be presented by the candidate before the Faculty Council for approval within four weeks.
- 7.4 A candidate will be given One Year for completion of his/her Dissertation after approval of the research synopsis for M. Phil Dissertation.
- 7.5 The candidate shall work under the supervision of Supervisor/Guide appointed for this purpose by the concern department after the approval of Dissertation.
- 7.6 An extension of one more year will be given in case of Non-Completion or rejection of M. Phil. Dissertation.
- 7.7 The date for the submission of Dissertation shall be notified by the Faculty Council.
- 7.8 The Board of Examiners for Viva Voce Examination shall comprise of the Head of the Department, Supervisor and External Examiner approved by the Faculty Council.
- 7.9 The Board of Examiners shall evaluate the Dissertation in an oral examination of the candidate. A candidate should score at least 60% marks for the approval of the Dissertation.
- 7.10 The Board may recommended a revision and one time re-submission of the Dissertation in case the Dissertation is not up to the standard and he/she fails to get 60% marks.
- 7.11 The candidate should be informed in writing by the convener about the changes he/she has to carryout in the Dissertation under intimation to the Controller of Examinations.
- 7.12 The candidate will resubmit the Dissertation after making the changes proposed by the Board of Examiners within Three months. The convener of the Board shall reconvene the meeting of the Board of Examiners to evaluate the resubmitted Dissertation in an oral examination of the candidate.

- 7.13 In case the candidate does not carry out the suggested amendments or fails in oral examination after the second attempt, his/her candidature shall be cancelled.
- 7.14 The candidate has to submit a new Dissertation after approval by the university authorities, if he/she desires and he/she will be considered new candidate for M.Phil. Dissertation.
- 7.15 Dissertation must form a distinct contribution to knowledge and afford evidence of originality, shown by the exercise of independent critical judgment.
- 7.16.1 Dissertation must not include research work for which degree has been conferred on him/her in this or any other university.
- 7.17 The candidate shall submit through his/her supervisor four copies (05 copies in case of co-supervisor) of his/her Dissertation typed or printed, along with 4 copies of a short abstract of about 1000 words. The candidate will also submit formatted copy of Dissertation on one CD for electronic library.
- 7.18 The Dissertation should be presented according to the format approved by the King Edward Medical University Lahore.
- 7.19 The Dissertation, which has been accepted, shall become property of the King Edward Medical University Lahore.
- 7.20 The candidate shall pay the prescribed fee for the examination at the time of submission of the Dissertation.

Annexure I

The thesis synopsis should be organized according to the following pattern.

a.	Title	
b.	Introduction	Should clearly manifest why the present work is undertaken.
c.	Literature Review	Place the project in academic context by referring to the major work by others on the topic.
d.	Objectives	Define clearly the aims of the research proposal.
e.	Significance	Explain the significance of the proposal for the field and the country.
f.	Plan	Give month wise tentative plan of the work.
g.	Methodology	Explain the approach and methods he/she will follow
h.	Bibliography	Up to date references.

Annexure II

The dissertation must be bound in accordance with the following specifications.

- a. Quarts approximately 10 inches, except for drawings and maps on which on restriction in placed. A margin of 105 inches to be left on left hand side. Cloth bound in standard size. Lettered boldly up back in gold (1 inch letters).
- b. The front should be the title, name of the candidate and the insignia of the University.

Annexure III

Terms & Definitions

1. Modules and Units (Small Packets):

Modularization of the Curriculum involves dividing the curriculum content (syllabus) into modules, which can be further divided into units. The module should consist of coherent and explicit learning activities. Modules can vary in length, but most institutions are moving towards standardization of length and credit value of the modules.

All programs based on Multiple Year Study Block, Annual Study Blocks and Semesters can be modularized. Thereby dividing the curriculum contents (syllabus) into small packets (modules) which can be further divided into units.

Thus, Modularization of curriculum is a way of organizing learning material in self-contained units that fit learner needs rather than the rigid boundaries of traditional courses. Each module is a self-contained learning unit based on the achievement of a specified set of learning outcomes.

In any modern educational institution, great flexibility is needed in terms of curricular design. The increasing trend towards modular systems and the running of courses, the scheduling system used must have sufficient flexibility to allow it to deal with a wide variety of structures.

In modularization the curriculum divided into more discrete units of assessable study can be easily replaced by new units / parts of improved quality. Modularization means that small parts can be put together to a whole because they come with standardized interfaces by which they can be connected.

Modules create greater access and flexibility to learning, to a variety of assessment tools, and to attainment of certification. They clearly define competencies / outcomes and assessment methods and expectations.

The focus on learning outcomes and the workload of students may help to increase the transparency as well as the efficiency of study programs.

Semester's academic units and modules are also support students for migration and re-entry.

2. CREDIT ACCOMOLATION AND TRANSFER SYSTEM (CATS) of KEMU

In a credit accumulation system learning outcomes totalling a specified number of credits must be achieved in order to successfully complete a semester, academic year or a full programme of study, according to the requirements of the programme. Credits are awarded and accumulated if the achievement of the required learning outcomes is proved by assessment.

Credit accumulation provides students with the opportunity to have their learning achievements (e.g. from work-based and experiential learning) count towards a qualification. Credit transfer works at various levels: regional; inter-university; internal (within institutions); inter-qualification (e.g. from diploma to degree programmes); further/higher education; on campus/off campus (i.e. employment, work-based, distance learning); and internationally (i.e. European, transatlantic and global).

A credit accumulation and transfer system is a systematic way of describing an educational program by attacking credits to its components. Credit Hour or Credit Unit is basically the academic currency of the academic activities i.e. units, modules, semesters or programs. The Credit Accumulation and Transfer System (CATS) at King Edward Medical University Lahore have been based upon most commonly used "European Credit Transfer System (ECTS)".

The CATS credits are values allocated to course units to describe the student workload required to complete them. They reflect the quantity of work each course requires in relation to the total quantity of work required to complete a full semester of academic study at the institution, that is, lectures, practical work, seminars, private work – in the library or at home – and examinations or other assessment activities, CATS credits express a relative value.

Key Features of CATS

- i) CATS is based on the principle that 60 credits measure the workload of a full-time student during one academic year. The student workload of a full-time study program in Europe amounts in most cases to around 1500-1800 hours per year (at KEMU 1600 hrs per year), and in those cases one credit stands for around 25 to 30 working hours (at KEMU, clinical training is provided to students in small groups. Especially in postgraduate programs the teacher and student contact is very close). The academic week at KEMU is of 40 hours (Morning and Evening Teaching). One credit is equal to 25 to 30 hours (for both taught and practical training).
- ii) Credits in CATS can only be obtained after successful completion of the work required and appropriate assessment of the learning outcomes achieved. Learning outcomes are sets of competences, expressing what the student will know, understand or be able to do after completion of a process of learning, long or short.
 - iii) Students workload in CATS consists of the time required to complete all planned learning activities such as attending

lectures, seminars, independent and private study, preparation of projects, examinations, and so forth.

- iv) Credits are allocated to all educational components of a study program (such as modules, courses, placements, dissertation work, etc.) and reflect the quantity of work each component requires to achieve its specific objectives or learning outcomes in relation to the total quantity of work necessary to complete a full year of study successfully.
- v) KEMU – CATS will make study programs easy to read and compare within Pakistan and abroad. CATS will facilitate mobility of students and academic recognition and will help KEMU to organize and revise their study programs.
- vi) The interpretation of foreign grades is a sensitive issue within the field of education as grading system varies from country to country. It provides common procedures to guarantee academic recognition of studies abroad. It provides a way of measuring and comparing learning achievements, and transferring them from one institution to another.
- vii) In CATS normally 30 credits are given for a semester. Credits are awarded when a course has been completed and all required examinations have been successfully taken.

3. PREPARING PROGRAM SPECIFICATION

i) Introduction

The students must be provided clear and explicit information so that they can make informed choices about their studies and the levels they are aiming to achieve each program therefore must be developed by the universities according "Program Specifications" which identifies intended out come of the program in terms of

- The knowledge and understanding that a student will be expected to have upon completion
- Key skills; communication, numeracy, biostatistics, information technology and learning how to learn
- Cognitive skills such as understanding ability in critical analysis
- Subject specified skills such as laboratory, clinical and therapeutic

ii) Definitions and Types

The term program is used in the sense of an institutionally defined curriculums route that leads to a named award, and have following types.

- I. Single major subject program

- II. A joint program combining two subjects each with their own learning outcomes
- III. Interdisciplinary program
- IV. Multi disciplinary program
- V. Split program; one program runs by partly by more institutions.

iii) Program Specification

One particular approach to program specifications is not prescribed ; KEMU will wish to consider how the departments present their program specifications and determine their content. It is, however, suggested following information that is normally included in a program specification, is recommended.

- Awarding body / institution; KEMU, Lahore.
- Teaching institution (if different) (In case of affiliation)
- Details of accreditation by a professional / statutory body
- Name of the final award; M.Phil (subject)
- Program title; as above
- Aims of the program
- Relevant subject benchmark statements and other external and internal reference points used to inform program outcomes
- Program outcomes: knowledge and understanding; skills and other attributes
- Teaching, learning and assessment strategies to enable outcomes to be achieved and demonstrated
- Program structures and requirements, levels, modules, credits and awards
- Date at which the program specification was written or revised
- Criteria for admission to the program
- Information about assessment regulations
- Indicators of quality;
- Particular support for learning
- Methods for evaluating and improving the quality and standards of learning

4. PROGRAM PROGRESS FILE

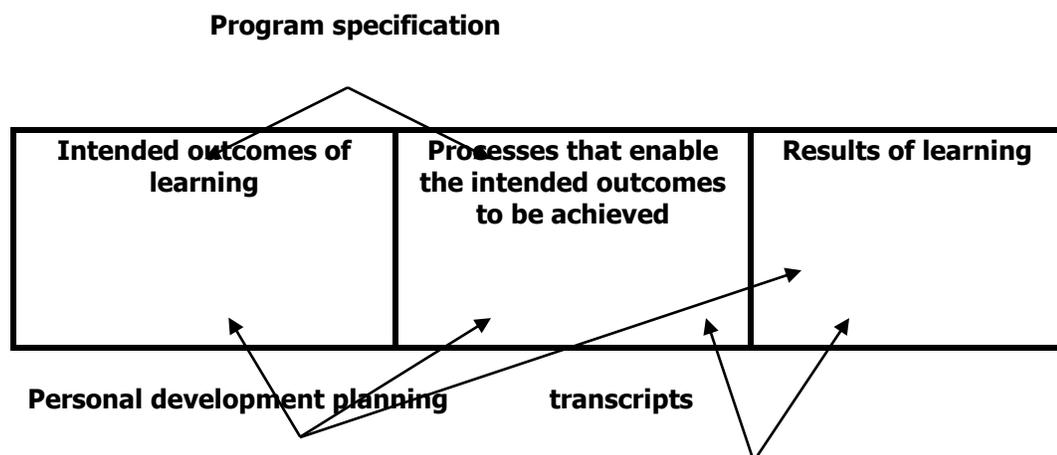
The Progress Files

The progress file is a document charting the progress of an individual and showed consist of two elements.

A transcript recording student achievement, which should follow a common format, derived by universities through their representative bodies.

Personal development planning undertaken by an individual as a structured and supported process to reflect his or her own learning, performance and/or achievement also known as "**Log Book**".

- A. Schematic representation of the outcomes approach to learning showing the relationship between program specifications, transcripts and personal development planning.



B. Transcript

The transcript provides a comprehensive verifiable record of learning and achievement of an individual learner. Many HE institutions already provide students with a transcript but there is considerable variation in the information they contain. The progress file provides an opportunity to move towards a more consistent transcript which would:

- Improve the quality and consistency of information on the learning and achievement of individual students in higher education for the benefit of everyone who has an interest in such information;
- Promote awareness of the national qualification frameworks and national and international transparency and recognition of higher education awards;
- Contribute to an individual's lifelong record of learning and achievement;
- Support the process of personal development planning; and
- Encourage good practice in the provision of information on learning the Punjab higher education.

C. Recommended data set for a transcript

Student

- Name
- Date of birth
- Institutional reference number
- HE reference number

Qualification

- Name of qualification
- Level of qualification in National Qualification Framework (NQF)
- Name of awarding institution
- Name of institution responsible for delivering the program
- Language (s) of instruction (to meet HEC requirement)
- Language (s) of assessment (to meet HEC requirement)
- Professional Body accreditation to be appointed by PMDC.
- Statutory Regulatory Body recognition / approval (HEC / PMDC).

Record of learning and achievement

- Name of program
- Module or Sub-module (unit) study
- Title of previous examination
- Date (year) of last examination
- Marks of examination
- Number of attempts to pass last examination

Other Types of Learning within the context of a program

- Rotations X study visits to other institutions
- Work placement
- Work experience
- Accredited prior certificated and experiential learning
- Accredited Key Skills

Award

- Overall marks
- Overall classification or performance indicator (e.g. merit / distinction)
- Professional / statutory Body recognition (Regarding Credit Accumulation and Transfer)
- Date of award

Authentication

- Date of issue
- Signature / seal (to be determined by the University / College / Institution)
- Telephone number for validating information

Explanatory information

- Guidance on how to interpret the transcript (will be developed by universities)
- Overview of the National Qualification Awards Framework (to be issued by the HEC)
- Overview of the HE system (to be issued by HEC)

D. Personal Development Planning

The term personal development planning (PDP) is being used to describe the 'means by which students can monitor, build and reflect upon their personal development'.

Higher education already employs a variety of strategies to encourage students to reflect upon and evaluate their own learning experiences and plan for their own development. A variety of terms are used to describe a process of reviewing and recording learning and achievement, and action planning e.g. Personal Profiling, Personal and Academic Records, Personal (Academic) Development Plans, Progress Files, Learning Portfolios, Learning Logs and Diaries. Many of these terms emphasize that the records are a product of process. The term personal development planning is used in order to emphasize that this is an active learning process undertaken by individuals for themselves.

E. Personal Development Planning Quality Standards

Opportunities and entitlements

The minimum expectations for institutional PDP policies are that:

- At the start of a program, students will be introduced to the opportunities for PDP;
- Students will be provided with opportunities for PDP at each stage of their program.
- The rationale for PDP at different stages of a program will be explained for the benefit of students (e.g. in student or course handbooks or module/unit guides);
- The nature and scope of opportunities for PDP, and the recording and support strategies will be determined by each institution.

These minimum criteria are not intended to constrain existing practice or local initiatives and institutional or local policies are likely to exceed these minimum expectations.

Minimum outcomes

On completion of their program students will have:

- Participated in PDP in a range of learning contexts at each stage or level of their program;
- Demonstrated that they can access and use the aids and tools provided by the institution to help them reflect upon their own learning and achievements and to plan for their own personal, educational and career development;

- With support, created their own learning records containing information on the qualities and skills they can evidence which can be drawn upon when applying for a job or further study.

Information on PDP

- The opportunities for PDP in student programs will be made clear in the program specification and through any other means the institution considers appropriate;
- Students who are applying to study in HE will be informed about the institution's policies on PDP;
- At the start of their program students will be provided with information on PDP in their program including a rationale for the approaches used;
- Students will be provided with information on how they might integrate extra-curricula experiences (for example: voluntary service, part-time employment or work placements, study abroad, fieldwork and working as a student representative or Student Union officer) into their own personal development planning process;
- Students will be provided with information on any ways in which their own evidence of learning might be eligible for accreditation;
- Formal opportunities for PDP in the HE curriculum will be identified in the HE Transcript.

Quality Assurance

- Institutions will be expected to have mechanisms to assure themselves that PDP is being implemented effectively.
- Guide line for the academic staff to explain expectations of the Personal Development Planning (PDP) to enable students to describe their own learning, performance or achievement and to plan their personal, educational and career development.

Approach to PDP	Year-I	Year-II
1. Supporting the development and recognition of skills through the personal tutor system.		
2. Supporting the development and recognition of skills in academic modules / units.		
3. Supporting the development and recognition of skills through purpose designed – modules/units		
4. Supporting the development and recognition of skills through research projects and dissertations work.		
5. Supporting the development and recognition of career management skills.		
6. Supporting the development and recognition of career management skills through work placement or work experience.		
7. Supporting the development of skills by recognizing that they can be developed through extra curricula activities.		
8. Supporting the development of the skills and attitudes as basis for continuing professional development.		
9. Other approaches to personal development planning.		
10. The means by which self-reflection, evaluation and planned development is supported e.g. learning log book or diary.		

4.3 **LOG BOOK**

1. General Information

- 1.1 Particulars of the candidate
- 1.2 Objectives of the logbook
- 1.3 Instructions to the students
- 1.4 Guidelines for the project director
- 1.5 Aims and objectives of the training program
- 1.6 Guidelines for the competency levels
- 1.7 Guidelines for filling consolidated sheets
- 1.8 List of different types of procedures
- 1.9 Weekly program

2. Skills Record

- 2.3 General Skills
- 2.4 Procedures
- 2.5 Case Presentation
- 2.6 Journal Clubs
- 2.8 Consolidated sheet

3. Progress Report

- 3.1 Record of regular test
- 3.2 Record of journal club meeting
- 3.3 Record of paper / case presentation
- 3.4 Record of conferences / workshops / lectures attended
- 3.5 Record of leave / absence / explanation

4. (Assessment)

A. Guidelines

- 1. Written Examination
- 2. Skills
- 3. Oral Examination and Table Viva

B. Records

Annexure IV

Quality Assurance

1. Academic Standard And Academic Quality

"Academic Standards" are predetermined and explicit levels of achievement that must be reached for a qualification to be awarded. "Academic Quality" the effectiveness of procedures and provisions that enable students to achieve qualification.

The Academic Standards therefore are incorporated into the followings:

1. Curriculum Design-Content-Organization.
2. Teaching-Learning-Assessment
3. Student progression and Achievement
4. Student Support and Guidance.
5. Learning Resources (State of Practice / Art)
6. Quality Management and Enhancement.

The measurement of effective of theses Academic Standards will determine the level of the "Academic Quality".

2. Quality Assurance Of The Program

The academic standards are developed as predetermined and explicit levels of achievements that must be reached by the students, different persons and bodies in the university must administrate the learning facilities and environment that must be arranged by the institution and the procedures efficiently and effectively.

The "Quality Assurance" is therefore carried out in three (03) cycles.

Cycle – 1: Monitoring; Continues monitoring by the faculty resulting in "Annual Monitoring Report". The report is generated by the Program Director. This is carried out every year.

Cycle – 2: Peer Review; or Internal Review, by a "Peer Review Committee" contributed by the King Edward Medical University comprising of three (03) teachers of the same specialty of the program, who are not members of the Program Faculty Committee these members may be preferably from outside the King Edward Medical University if available.

The cycle –2 is carried out every three (03) years.

Cycle – 3: "Accreditation; or External Review" The quality review is carried out by external reviews appointed by an Accreditation Body, board or Council. This cycle will be repeated every five (05) years, and King Edward Medical University makes all Accreditation reports available to the public.

3. Criteria For Peer Review Of The Academic Department With Reference To Academic Program

To review of the provisions of the program specification and the subject; the academic reviewers use a number of questions that have bearing on program specifications are stated below with a brief commentary.

Aims and Outcomes

I. Evaluation of intended learning outcomes in relation to external reference points and to the broad aims of provision. Reviewers should ask:

- What are the intended outcomes for a program?
- How do they relate to external reference points including subject benchmark statements, the qualifications framework and any professional body requirements?
- How do they relate to the overall aims of the provision as stated by the subject provider?
- Are they appropriate to the aims?

Commentary – Program specifications may be used to help explain the aims and outcomes of program show what reference points have been used in the construction of outcome statements and indicate how these outcomes relate to the national qualification frameworks and relevant subject benchmark statements.

II. Evaluation of the means by which the subject provider designs curricula that permit achievement of intended outcomes. Reviewers should ask:

- How does the provider ensure that curriculum content enables students to achieve the intended learning outcomes?
- How does the provider ensure that the design and organization of the curriculum is effective in promoting student learning and achievement of the intended learning outcomes?

Commentary – Reviewers will look for evidence of the planning and deliberative process through which program outcomes were determined and the curriculum designed to enable outcomes to be achieved. They will also look for evidence of how teaching teams evaluate whether the curriculum is effective in promoting learning and achievement against intended outcomes.

III. Evaluation of the means by which intended outcomes are communicated to students, staff and external examiners. Reviewers should ask:

- How are the intended outcomes for a program and its constituent parts communicated to staff, students and external examiners?
- Do the students know what is expected of them?

Commentary – Reviewers will consider the information available to staff and provided to students and external examiners. They might consider how program specifications are used to promote understanding about the program outcomes and the other strategies used to communicate information of this type.

Curricula

IV. Evaluation of the means by which the subject provider creates the conditions for achievement of the intended learning outcomes. Reviewers should ask:

- Do the design and content of the curricula encourage achievement of the intended learning outcomes in terms of knowledge and understanding, cognitive skills, subject-specific skills (including practical / professional skills), transferable skills, progression to employment and/or further study, and personal development?
- Is there evidence that the curricular content and design is informed by recent developments in techniques of teaching and learning, by current research and scholarship, and by any changes in relevant occupational and professional requirements?

Commentary – Reviewers will look for evidence that the curriculum supports the progressive development of intended outcomes. Program specifications can be used to show how the curriculum promotes the development of particular outcomes at each level. They may feature new or innovative pedagogic practice, or indicate which curriculum units have been particularly influenced by staff research.

Assessment

V Evaluation of the assessment process and the standard it demonstrates. Reviewers should ask:

- Does the assessment process enable learners to demonstrate achievement of the intended outcomes?
- Are there criteria that enable internal and external examiners to distinguish between different categories of achievement?
- Can there be full confidence in the security and integrity of assessment procedures?
- Does the assessment strategy have an adequate formative function in developing student abilities?

Commentary – the program specification provides a starting point for demonstrating how the assessment process enables the program outcome to be demonstrated.

Peer Review of the “Academic Programs” at KEMU.

The “Peer Review Committee” will be appointed by the Vice Chancellor to review the concerned academic department with relation to the Program every three (3) years. The Peer Review Committee will comprise of Three (3) experts in the same subject. These experts will be the teachers who are not members of the “Program Faculty Committee” of the same program. However it will be preferred to appoint members from out side KEMU. The “Peer Review Committee” will examine the yearly “Monitoring Reports” produced by the program directors, inspect the learning facilities and the conduction of the programs and interview the students and the teaching faculty (especially the young).

Criteria to review and report the program will be based on following six essential elements.

1. Curriculum Design-Content-Organization.
2. Teaching-Learning-Assessment
3. Student progression and Achievement
4. Student Support and Guidance.
5. Learning Resources (State of Practice / Art)
6. Quality Management and Enhancement.

All elements will evaluate out of 100 points and rated against 4 points as under.

1 (1 – 25)	2 (26 – 50)	3 (51 – 75)	4 (76 – 100)
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The final report of “Peer Committee” will be according to Quality Assurance criteria $6 \times 4 = 24$ points.

1. ACCREDITATION RULES OF PROCEDURE
 These will be adopted from Liaison Committee on Medical Education, USA August 2005 edition [updated February 2006 and June 2006]

5. FACULTY SATISFACTION LEVEL

As required by Higher Education Commission, The Program Director will assess the faculty satisfaction level regarding the Postgraduate Diploma Program according to following criteria.

A: Excellent B: Very good C: Good D: Fair E: Poor

Sr.No	DESCRIPTION	A	B	C	D	E
1	Cooperation you received from colleagues	A	B	C	D	E
2	Cooperation you received from program director	A	B	C	D	E
3	Cooperation you received from Program Examination Committee.	A	B	C	D	E
4	The monitoring you performed & student response.	A	B	C	D	E
5	Remunerations/compensation for the Program.	A	B	C	D	E
6	Your satisfaction on the overall curriculum.	A	B	C	D	E
7	Your satisfaction on the overall learning resources.	A	B	C	D	E
8	Overall academic environment of the department.	A	B	C	D	E
9	Efforts to meet the time limits.	A	B	C	D	E

10. Your recommendation to improve the Program.

Name of the Teacher: _____

Activity involved in module nos: _____

Designation: _____

Address: _____

Date: _____ Signature: _____

6. STUDENT SATISFACTION LEVEL

As required by Higher Education Commission, the Program Director will assess the Student Satisfaction level regarding the concerned diploma program according to following criteria. The survey will be conducted after end of semester – 2.

A: Excellent B: Very good C: Good D: Fair E: Poor

Sr No	DESCRIPTION	A	B	C	D	E
1	The work in the program is too heavy and induces a lot of pressure.	A	B	C	D	E
2	The program is effective in enhancing team-working abilities.	A	B	C	D	E
3	The program administration is effective in supporting learning.	A	B	C	D	E
4	The program is effective in developing analytic and problem solving skills.	A	B	C	D	E
5	The program is effective in developing independent thinking.	A	B	C	D	E
6	The program is effective in developing written communication skills.	A	B	C	D	E
7	The program is effective in developing planning abilities.	A	B	C	D	E
8	The content of the program is adequate for pursuing the advanced courses in the program.	A	B	C	D	E
9	The training experience is effective in enhancing.	A	B	C	D	E
	Ability to work in teams independent thinking	A	B	C	D	E
	Appreciation of ethical values.	A	B	C	D	E
	Professional development	A	B	C	D	E
	Time management skills judgment	A	B	C	D	E
	Discipline	A	B	C	D	E
	The link between theory and practice.	A	B	C	D	E

10. Your recommendation to improve the program.

Student Name: _____

Date: _____ Signature: _____

7. ALUMNI SATISFACTION LEVEL

As recommended by Higher Education Commission the purpose of this survey is to obtain alumni input on the quality of education and the level of preparation they had at King Edward Medical University. The Program Director will conduct this survey and throughout the year and carry out analysis of the opinion received at the end of the year and include in the Annual Monitoring Report.

A: Excellent B: Very good C: Good D: Fair E: Poor

Sr. No	DESCRIPTION	A	B	C	D	E
1	Problem formulation and solving skills.	A	B	C	D	E
2	Collecting and analyzing appropriate data.	A	B	C	D	E
3	Ability to link theory.	A	B	C	D	E
4	Computer knowledge.	A	B	C	D	E
5	Oral Communication.	A	B	C	D	E
6	Report writing.	A	B	C	D	E
7	Ability to work in teams.	A	B	C	D	E
8	Independent thinking.	A	B	C	D	E
9	Appreciation of ethical values.	A	B	C	D	E
10	Professional development.	A	B	C	D	E
11	Time management skills	A	B	C	D	E
12	Discipline	A	B	C	D	E

Your Recommendation to improve the Program

Alumni Name: _____ Date: _____

Designation / Position: _____

Address: _____

E-mail: _____ **Tel / Fax:** _____

Annexure V

Relevant Web Sites

Higher Education Commission Pakistan:

www.hec.gov.pk

Quality Assurance Agency for Higher Education-UK:

www.qaa.ac.uk

Higher Education in Europe;

http://ec.europa.eu/education/policies/educ/higher/higher_en.html

ECTS - European Credit Transfer and Accumulation System:

http://ec.europa.eu/education/programmes/socrates/ects/index_en.html