

**RIPHAH INTERNATIONAL UNIVERSITY**

**ISLAMABAD**



# **SELF ASSESSMENT REPORT**

**DPT**

**(DOCTOR OF PHYSICAL THERAPY)**

**Faculty of Rehabilitation and Allied Health Sciences**

**June 2019**

## Table of Contents

1.0	Executive Summary .....	6
1.1	Objectives .....	6
1.2	Execution .....	6
2.0	Introduction.....	8
2.1	University Mission Statement.....	8
2.2	Riphah College of Rehabilitation Sciences.....	8
2.3	Program Selected .....	8
2.4	Program Evaluation .....	9
3.0	Criterion 1: Program Mission, Objectives and Outcomes .....	9
3.1	Standard 1-1 .....	9
3.1.1	Program Mission Statement.....	9
3.1.2	Vision.....	9
3.1.3	Program Objectives.....	9
3.1.4	Alignment of Program Objectives with Program & University Mission Statements 10	
3.1.5	Main Elements of Strategic Plan.....	10
3.2	Standard 1-2.....	11
3.2.1	Program Outcomes.....	11
3.3	Standard 1-3 .....	12
3.3.1	Course Evaluation.....	12
3.3.2	Teachers Evaluation.....	14
3.4	Strong Areas.....	17
3.5	Area Requiring Focus .....	17
3.6	Standard 1-4.....	18
3.6.1	Graduates/Undergraduates enrolled in last three years.....	18
3.6.2	Student Faculty Ratio.....	18
3.6.3	Average GPA per Semester .....	18
3.6.4	Average Completion Time.....	18
3.6.5	Employer Satisfaction.....	18
3.6.6	Students Course Evaluation Rate.....	18
3.6.7	Research.....	18
3.6.8	Community Service .....	19
4.0	Criterion 2: Curriculum Design and Organization.....	19
4.1	Title of Degree Program .....	19
4.2	Definition of credit hour: .....	19
4.3	Degree plan .....	19
4.4	Course Information .....	23
3.	Molecular Neuropharmacology: A Foundation for Clinical Neuroscience, 2nd Edition by Eric J. Nestler, Steven E. Hyman and Robert C. Malenka. (Published in 2008 by McGraw-Hill Professional).....	36
4.	Molecular Medicine: An Introductory Text, 3rd Edition by R. J. Trent.(Published in 2005 by Academic Press).....	36
5.	Molecular Biology of the Cell, 5th Edition by Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts and Peter Walter.(Published in 2007 by Garland Science).....	36

6.	Human Molecular Genetics, 3rd Edition by Tom Strachan and Andrew Read. (Published in 2003 by Garland Science/Taylor & Francis Group).	36
9.	"Molecular Pathology: The Molecular Basis of Human Disease, 1st Edition by William B. Coleman, and Gregory J. Tsongalis.(Published in 2009 by Academic Press).	36
11.	Genetics: A Conceptual Approach, 3rd Edition by Benjamin Pierce (Published in 2007 by W. H. Freeman)	36
12.	Human Molecular Genetics, 3rd Edition by Tom Strachan and Andrew P Read(Published in 2003 by Garland Science/Taylor & Francis Group).	36
13.	Genetics-From Genes to Genomes, 3rd Edition by Hartwell, Hood, Goldberg, Reynolds, Silver and Veres(Published in 2006 by McGraw-Hill)	37
14.	Additional Study Material, as assigned by the tutor.	37
4.5	Standard 2-1	52
4.5.1	Group 1: Basic Medical and Allied Sciences (B.M.S)	53
4.5.2	Group 2: Clinical Specialties	53
4.5.3	Group 3 Humanities	53
4.6	Standard 2-2	53
4.7	Standard 2-3	54
4.8	Standard 2-4	54
4.9	Standard 2-5	54
4.10	Standard 2-6	54
4.11	Standard 2-7	55
5.0	Criterion 3: Laboratories and Computing Facilities	55
5.1	Standard 3-1	75
5.2	Standard 3-2	75
5.3	Standard 3-3	75
6.0	Criterion 4: Student Support and Advising	76
6.1	Standard 4-1	76
6.2	Standard 4-2	76
6.3	Standard 4-3	76
7.0	Criterion 5: Process Control	77
7.1	Standard 5-1	77
7.2	Standard 5-2	78
7.3	Standard 5-3	78
7.4	Standard 5-4	79
7.5	Standard 5-5	79
8.0	Criterion 6: Faculty	80
8.1	Standard 6-1	80
8.2	Standard 6-2	81
8.3	Standard 6-3	82
9.0	Criterion 7: Institutional Facilities	82
9.1	Standard 7-1	82
9.2	Standard 7-2	83
9.3	Standard 7-3	83
10.0	Criterion 8: Institutional Support	83
10.1	Standard 8-1	83

10.2	Standard 8-2 .....	84
10.3	Standard 8-3 .....	84
11.0	Conclusion .....	84
11.1	Strong Areas.....	85
11.2	Area Requiring Focus .....	86

## **List of Annexure**

<b>Annexure A:</b>	Alumni Survey
<b>Annexure B:</b>	Employer Survey
<b>Annexure C:</b>	Students Course Evaluation
<b>Annexure D:</b>	Students Teacher Evaluation
<b>Annexure E:</b>	Research Papers List
<b>Annexure F:</b>	Graduating Students
<b>Annexure G:</b>	Faculty Survey
<b>Annexure H:</b>	Faculty Resume
<b>Annexure I:</b>	Lab Safety Precautions
<b>Annexure J:</b>	AT Findings
<b>Annexure K:</b>	Implementation Plan
<b>Annexure L:</b>	Faculty Course Review
<b>Annexure M:</b>	Rubric Report

## 1.0 Executive Summary

This report is being prepared almost at the end of the assessment cycle for selected programs of Riphah International University, as per requirements of Higher Education Commission (HEC). Quality Enhancement Cell (QEC) was formed in Riphah in Oct 2009. Program Team Members of all faculties, were notified by University. They worked with QEC to pursue the application of Self-Assessment Manuals in their respective departments/faculties.

Currently, in Faculty of Rehabilitation and Allied Health Sciences (FR&AHS), **Doctor of Physical Therapy (DPT) program** was selected for self-assessment, evaluation and improvements. A strong commitment of Respected Vice Chancellor, Dean FR&AHS to support QEC made the difference and resultantly, 2<sup>nd</sup> cycle of assessment is about to complete.

### 1.1 Objectives

Following are the two main objectives of the self-assessment report:-

- a To implement Self-Assessment Manual in selected program with a view to improve quality in higher education.
- b To identify the areas requiring improvements in order to achieve objectives through desired outcomes.

### 1.2 Execution

A soft copy of self-assessment manual was given to all faculty members. Quality Awareness Lectures and Workshops on preparation of Self Assessment Report (SAR) were arranged for the In-charge Programs and Program Team (PT) Members of the selected program. The PT members with an intimate support and follow up of QEC, completed the SAR and forwarded to QEC in given time frame.

After reviewing SAR, QEC arranged visit of Assessment Team to the selected program.

The Assessment Team, indicated salient points of the SAR, account of his discussions with the faculty members, improvements required in the infrastructure, syllabi and training of the faculty and support staff. A few points were resolved during discussion. The implementation plan basing on the discussions in exit meeting have been made by in-charge programs.

At the completion of Self-Assessment cycle, QEC will submit the hard and soft copy of SAR to HEC before 30th July 2019.

**Director**

**Quality Enhancement Cell**

# Self-Assessment Report

## 2.0 Introduction

Riphah International University (Riphah) is a private university, chartered by the Federal Government of Pakistan in 2002. The university was established with a view to produce professionals with Islamic moral and ethical values. The Riphah International University is committed to promote and impart quality education with character building of the new generation in the light of Islamic principles and values. Riphah International University is committed to a value based integrated educational philosophy. It is running 10 faculties in 3 different campuses.

### 2.1 University Mission Statement

Establishment of state-of-the-art educational institutions with a focus on inculcation of Islamic ethical values.

### 2.2 Riphah College of Rehabilitation Sciences

Riphah College of Rehabilitation and Allied Health Sciences is running the following programs:

- a. Doctor of Physical Therapy (DPT)
- b. Master of Science in Orthopedic Manual Physical Therapy
- c. Master of Science in Neuromuscular Physical Therapy
- d. Master of Science in Cardiopulmonary Physical Therapy
- e. Master of Science in Sport Physical Therapy
- f. Master of Science in Women's Health Physical Therapy
- g. Master of Science in Pediatric Physical Therapy
- h. Master of Science in Speech and Language Pathology (MS/SLP)
- i. Board Certification Courses

### 2.3 Program Selected

Riphah International University has selected the **Doctor of Physical Therapy (DPT)** as first model program for Self-Assessment Report (SAR) for the year 2019-20 under the directives of HEC.



The program has got inbuilt mechanism for the revision of syllabi, has competent faculty and adequate infrastructure. New and modern tools have been introduced in the program to conduct research and quality teaching. This program followed HEC accredited Curriculum made by National Curriculum Revision Committee (NCRC) of HEC.

## **2.4 Program Evaluation**

The program is being evaluated based on 8 criterion and 31 standards as given in the Self-Assessment Manual provided by Higher Education Commission (HEC).

### **3.0 Criterion 1: Program Mission, Objectives and Outcomes**

#### **3.1 Standard 1-1**

**The program must have documented measurable objectives that support institution mission statements.**

##### **3.1.1 Program Mission Statement**

Doctor of Physical Therapy (DPT) program aims to impart theoretical, practical and clinical knowledge and skills to students to transform them into competent Health professionals along with sense of ethical and moral obligations.

##### **3.1.2 Vision**

“To be a Rehabilitation Sciences Institute of international repute known for quality and value-based education”

##### **3.1.3 Program Objectives**

The program is designed to achieve the following objectives:

1. To provide evidence based Physical Therapy education
2. To prepare the students to serve as responsible members in the professional community and willing and able to assume leadership roles in the communities they serve.
3. To enable the students to identify researchable problems, advocate and participate in research, and incorporate research findings into clinical practice.
4. To enable the students to understand and place in context the social, economic and cultural issues of practice and effectively advocate for changes in policy.

5. To enable the students to correlate theory with practice and think creatively about, react to, adapt or shape new practice environments.
6. To enable the students to participate in and provide education for communities, patients, peers, students and others.
7. To prepare students to work with in ethical values and betterment of the society at large.

### **3.1.4 Alignment of Program Objectives with Program & University Mission Statements**

Program objectives intend to impart not only clinical and diagnostic skills but moral and ethical information as well. This is done through planned set of activities during the execution of the DPT program. These activities include overall curriculum composition and its delivery, practical work and projects performed at required stages and House Job Placements to expose students to professional environment.

### **3.1.5 Main Elements of Strategic Plan**

The main elements as discussed above, of a strategic plan for the selected course are as under:

- a. Curriculum Composition
- b. Practical work and projects
- c. House Job Placements/Clinical Training

#### **3.1.5.1 Curriculum Composition**

DPT program comprises of core courses as per university requirements. It has 62 core courses. Curriculum is divided into different segments that builds student's base through basic set of courses and imparts advance knowledge by using advance courses. List of courses is available in section 3.3.1.

#### **3.1.5.2 Practical Work and Projects**

Practical work and projects are planned at desired stages during the program execution to enhance the working skills of the students. Clinical setting in Railway Hospital is available for students to practice the clinical work. At the end of their program, students are required to submit a final project that demonstrates their analysis, designing, solution building, implementation and report writing skills, in the form of designed project and its technical report.

### 3.1.5.3 House Job Placements

Clinical setting in Railway Hospital provides indoor and outdoor Physical therapy services that can offer placement work to RC&AHS students. House Job provides students with the opportunity to work in professional environment along with experienced professionals and learn from their experiences. This aspect of program also opens the doors of opportunities for talented students to seek permanent position in the participant hospital.

## 3.2 Standard 1-2

**The program must have documented outcomes for graduating students. It must be demonstrated that the outcome supports the program objectives and that graduating students are capable of performing these outcomes.**

### 3.2.1 Program Outcomes

#### **GRADUATES OF THE DOCTOR OF PHYSICAL THERAPY PROGRAMME WILL:**

1. Demonstrate in-depth knowledge of the basic and clinical sciences relevant to physical therapy, both in their fundamental context and in their application to the discipline of physical therapy.
2. Understand, correlate and apply theoretical foundations of knowledge to the practice of physical therapy; evaluate and clarify new or evolving theory relevant to physical therapy.
3. Demonstrate the behaviors of the scholarly clinician by developing and utilizing the process of critical thinking and inquiry, particularly focused on the improvement of the practice of physical therapy and the delivery of health care.
4. Engage in reflective practice through sound clinical decision making, critical self-assessment and commitment to lifelong learning.
5. Demonstrate mastery of entry level professional clinical skills. Provision of these services is based on the best available evidence and includes physical therapy examination, evaluation, diagnosis, prognosis, intervention, prevention activities, wellness initiatives and appropriate health care utilization.
6. Prepared to influence the development of human health care regulations and policies that are consistent with the needs of the patient and of the society.
7. Demonstrate leadership, management, and communication skills to effectively participate in physical therapy practice and the health care team.
8. Incorporate and demonstrate positive attitudes and behaviors to all persons.

9. Demonstrate the professional and social skills to adapt to changing health care environments to effectively provide physical therapy care.
10. Be able to carry out a consultation with a patient.
11. Be able to diagnose and manage clinical presentations.
12. Be able to carry out practical procedures safely and effectively.
13. Be able to behave according to ethical and legal principles.
14. Be able to reflect, learn and teach others.
15. Be able to learn and work effectively within a multi-professional team.
16. Be able to protect patients and improve care.

Following table shows the link between program objectives and program outcomes:

Program Objectives	Program Outcomes															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	X	X	X						X						X	X
2		X	X	X								X				
3		X		X	X	X	X							X	X	
4		X		X						X					X	
5				X				X						X		X
6				X					X				X	X		
7		X			X								X			X

**Table 2: Outcomes versus Objectives**

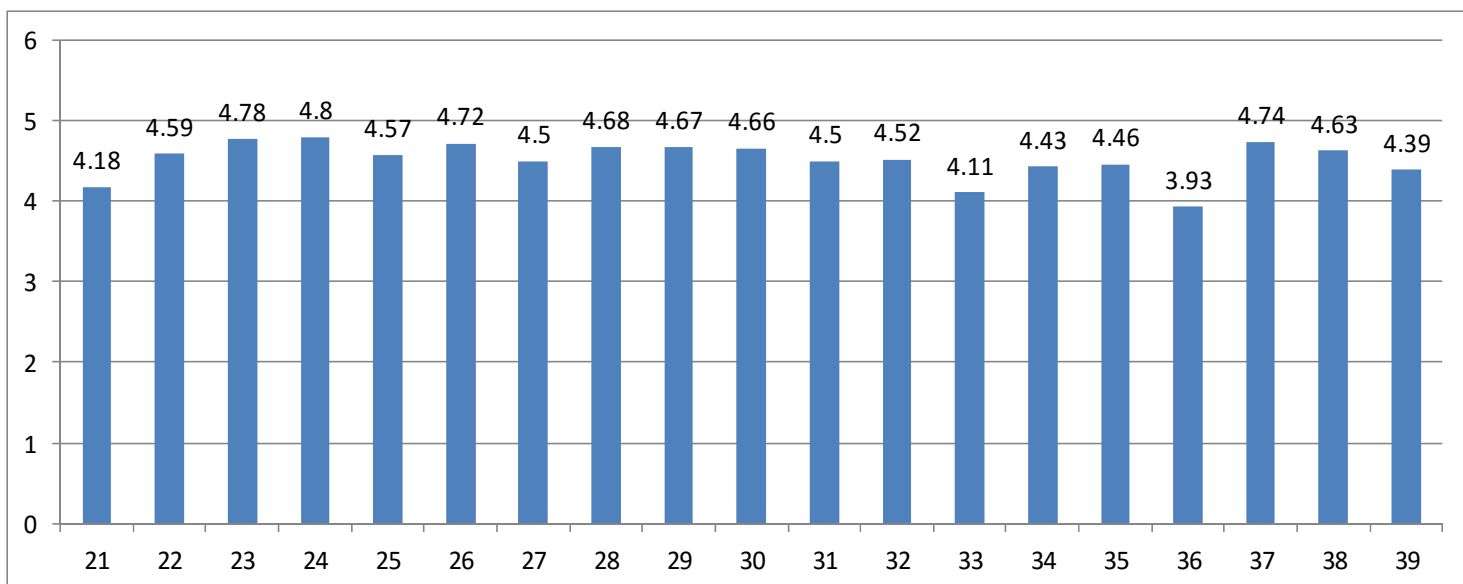
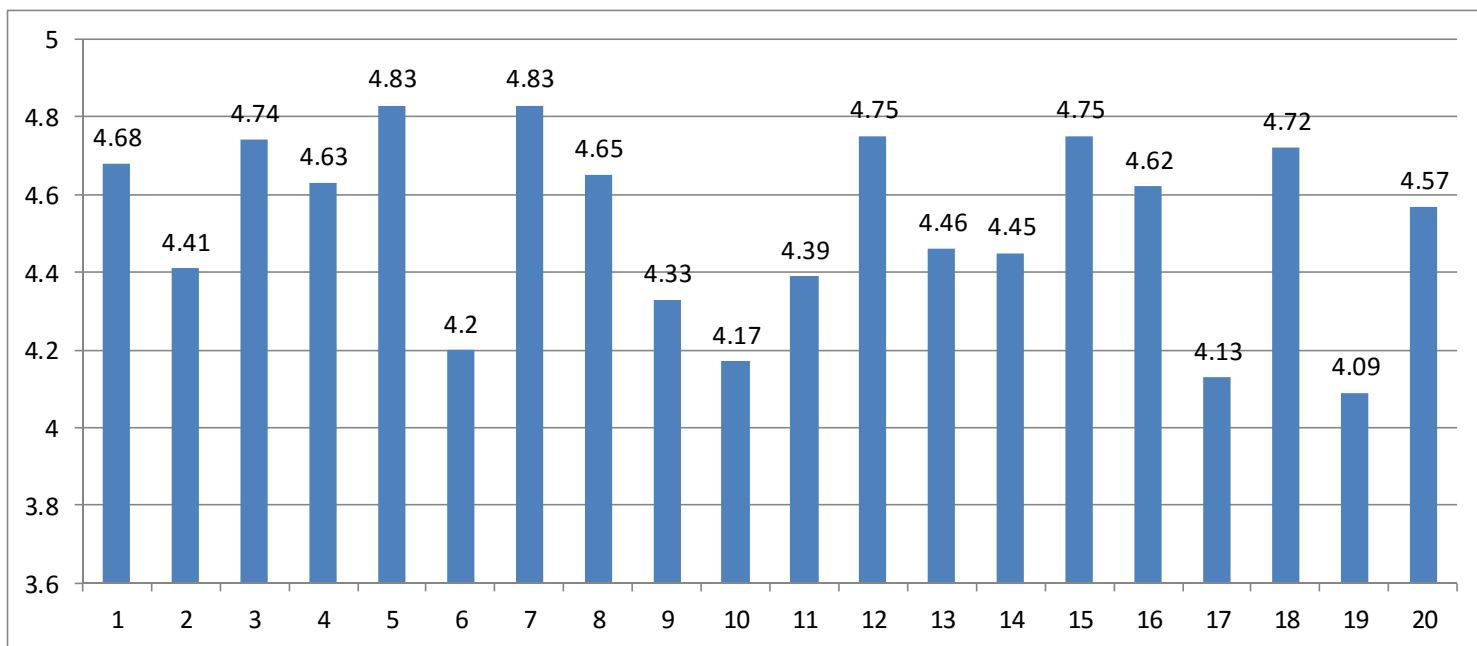
### 3.3 Standard 1-3

**The results of Program's assessment and the extent to which they are used to improve the program must be documented.**

The RCR&AHS assessment has been done by launching HEC Performa number 1 and 10.

#### 3.3.1 Course Evaluation

Courses evaluation is shown in the following graphical chart:



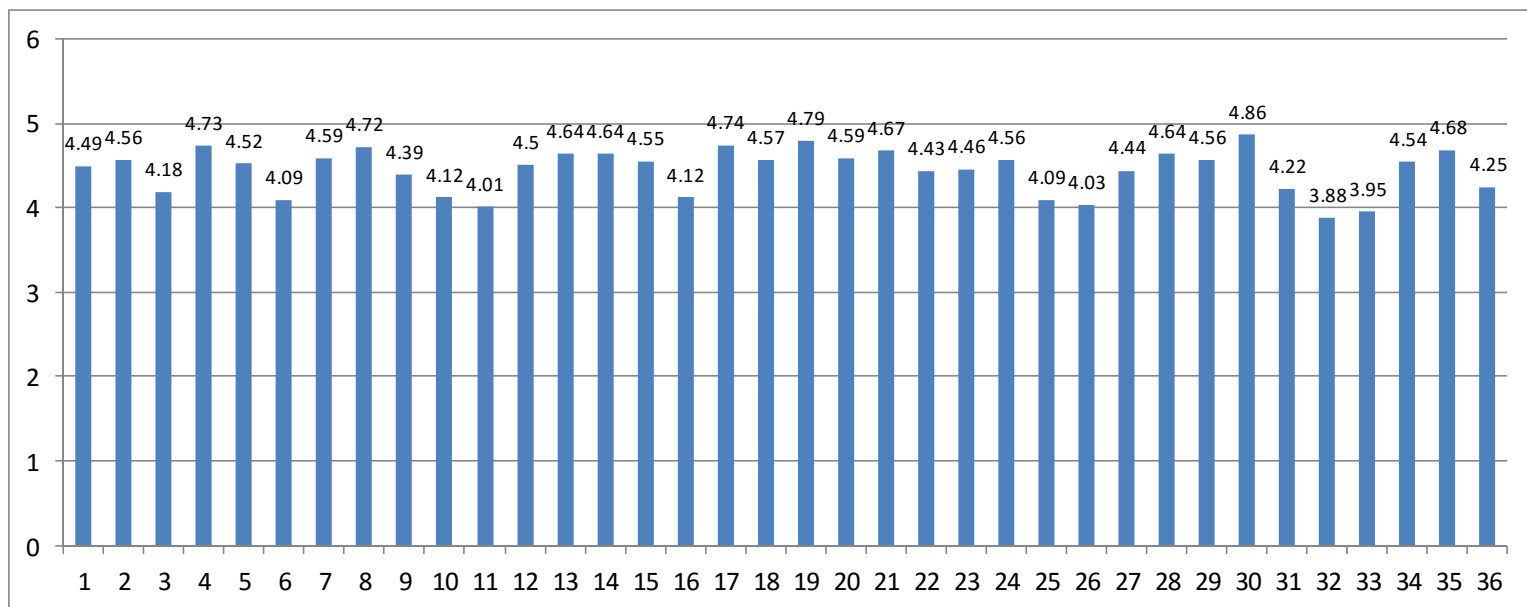
Students have graded the courses against the course structure, teaching methodology, learning objectives and outcomes and practical implementation of theory. The total graded marks are 5.

Following is the list of courses that are being evaluated by the students along with their course code and graded scores. See Annexure C (Course Evaluation Survey) for sample course evaluation results. The sample shows the results for one course only while same has been done for all courses listed below. The results of all other courses have been kept in a separate file for record purposes.

Sr. No	Course	Marks	Responses /Enrolled students on VLE
1.	Anatomy-I	4.68	36/36
2.	Anatomy-II	4.41	15/16
3.	Anatomy-III	4.74	12/14
4.	Anatomy IV	4.63	6/8
5.	Bio Chemistry & Genetics-I	4.83	13/15
6.	Biochemistry & Genetics-II	4.2	7/9
7.	Biomechanics & Ergonomics-I	4.83	12/14
8.	Biomechanics & Ergonomics-II	4.65	8/10
9.	Cardiopulmonary Physical Therapy	4.33	9/14
10.	Clinical Decision Making & DD	4.17	10/15
11.	Emergency Procedures	4.39	4/4
12.	Evidence Based Practice	4.75	4/8
13.	Exercise Physiology	4.46	7/9
14.	Gynecology & Obstetrics PT	4.45	4/4
15.	Health & Wellness	4.75	12/13
16.	Health Education & Teaching Methodology	4.62	7/8
17.	Integumentary Physical Therapy	4.13	8/9
18.	Intro to Computer	4.72	36/38
19.	Islamic Studies	4.09	14/14
20.	Kinesiology-I	4.57	36/37
21.	Kinesiology-II	4.18	15/15
22.	Manual Therapy	4.59	9/11
23.	Medical Physics	4.78	7/9
24.	Medical physics	4.8	13/15
25.	Musculoskeletal Physical Therapy	4.57	4/4
26.	Pathology & Microbiology-I	4.72	11/11
27.	Pathology & Microbiology-II	4.5	6/6
28.	Pediatric Physical Therapy	4.68	4/4
29.	Physical Agents & Electrotherapy-II	4.67	7/7
30.	Physiology-I	4.66	36/38
31.	Physiology-II	4.5	15/15
32.	Physiology-III	4.52	12/12
33.	Professional Practice	4.11	7/8
34.	Research Design & Methodology	4.43	8/10
35.	Sports Physical Therapy	4.46	4/4
36.	Supervised Clinical Practice V	3.93	4/5
37.	Therapeutic Exercise & Technique-I	4.74	12/12
38.	Therapeutic Exercise & Techniques-II	4.63	6/6
39.	Emergency Procedures	4.39	4/4

### 3.3.2 Teachers Evaluation

Teacher's evaluation is shown in the following graphical chart:



**Figure 2: Teachers Evaluation Graph**

Students have graded the teachers against their lecture preparation, punctuality, general behavior, subject knowledge and teaching methodology. The total graded marks are 5.

See Annexure D (Teachers Evaluation Survey) for sample teacher evaluation results.

Following is the list of teachers that are being evaluated by the students along with the serial number and graded scores.

Sr. No	Teacher Name	Course Name	Responses /Enrolled students on VLE	Marks
1.	Danish Latif	Kinesiology-I	36/37	4.49
2.	Danish Latif 2	Physiology-I	36/38	4.56
3.	Danish Latif 3	Kinesiology-II	15/15	4.18
4.	Danish Latif 4	Health & Wellness	12/13	4.73
5.	Danish Latif 5	Health Education & Teaching Methodology	7/8	4.52
6.	Dr. Aisha Razzaq	Clinical Decision Making & DD	10/15	4.09
7.	Dr. Faheem Afzal	Anatomy-II	15/16	4.59
8.	Dr. Faheem Afzal2	Anatomy-III	12/14	4.72
9.	Dr. Faheem Afzal	Exercise Physiology	7/9	4.39
10.	Dr. Faheem Afzal4	Clinical Decision Making & DD	10/15	4.12
11.	Dr. Faheem Afzal5	Professional Practice	7/8	4.01
12.	Dr. Faheem Afzal6	Sports Physical Therapy	4/4	4.5
13.	Dr. Muhammad Affan Iqbal	Anatomy-I	36/36	4.64
14.	Dr. Muhammad Affan Iqbal 2	Therapeutic Exercise &	6/6	4.64

		Techniques-II		
15.	Dr. Muhammad Affan Iqbal 3	Musculoskeletal Physical Therapy	4/4	4.55
16.	Dr. Muhammad Affan Iqbal 4	Professional Practice	7/8	4.12
17.	Dr. Saira Jahan	Pathology & Microbiology-I	11/11	4.74
18.	Dr. Saira Jahan2	Pathology & Microbiology-II	6/6	4.57
19.	Dr. Syed Ali Hussain	Medical physics	13/15	4.79
20.	Dr. Syed Ali Hussain2	Medical Physics	7/9	4.59
21.	Dr. Syed Ali Hussain3	Physical Agents & Electrotherapy-II	7/7	4.67
22.	Dr. Syed Ali Hussain4	Manual Therapy	9/11	4.43
23.	Dr. Syed Ali Hussain5	Gynecology & Obstetrics PT	4/4	4.46
24.	Dr. Tahir Ramzan	Physiology-II	15/15	4.56
25.	Dr. Tahir Ramzan2	Integumentary Physical Therapy	8/9	4.09
26.	Hafiz Muhammad Zahid Yasin	Islamic Studies	14/14	4.03
27.	Mir Arif Hussain	Physiology-III	12/12	4.44
28.	Mir Arif Hussain2	Anatomy IV	6/8	4.64
29.	Mir Arif Hussain3	Pediatric Physical Therapy	4/4	4.56
30.	Mubin Mustafa	Bio Chemistry & Genetics-I	13/15	4.86
31.	Mubin Mustafa2	Biochemistry & Genetics-II	7/9	4.22
32.	Muhammad Iqbal Tariq	Cardiopulmonary Physical Therapy	10/14	3.88
33.	Muhammad Iqbal Tariq2	Supervised Clinical Practice V	4/5	3.95
34.	Muhammad Iqbal Tariq3	Emergency Procedures	4/4	4.54
35.	Sadia Ashraf	Intro to Computer	36/38	4.68
36.	Saira Fahad	Evidence Based Practice	5/8	4.25

This evaluation was carried out by Quality Enhancement Cell to ensure the unbiased feedback from students. QEC staff visited different classes and gathered feedback as desired. QEC performed analysis of the data and submitted the results to Director for further actions.

Students' feedback data regarding courses and teachers was analyzed using MS Excel software through data analysis techniques. Data was presented to Director in graphical bar charts, who discussed and identified the improvement areas. The decision was made to present the findings in the Board of Studies that will discuss, make decision and forward the findings to next authority level if deemed appropriate. Next meetings of Board of Studies and Board of Faculties are planned during the summer vacations.

Like any other program, DPT program has also some good and some weak areas. These are listed as under:



### **3.4 Strong Areas**

- Our DPT is the only program in South Asia which is accredited by World Confederation of Physical Therapy (WCPT)
- Excellent Students-Teacher Ratio
- A very powerful and expanded international library with online access to medical journals
- Keeping in view ISLAMIC VALUES inculcating state of the art education most of the students specifically girls' students prefer to join this institution.
- Curriculum design, development and organization are based upon set, well defined and approved criteria by HEC
- Clinical training/practice at Pakistan Railway Hospital, Riphah International hospital, Max Health Hospital and Riphah Executive Clinic.
- Academic calendar is adhering to and examinations schedule prepared at the beginning of the year.
- Curriculum is accredited by HEC
- Numbers of Courses along with their titles and credit hours for each year, course contents for degree program are fully planned.
- Transparent admission, registration and recruiting policy
- Properly scheduled classes and examinations.
- Study visits across Pakistan
- Research oriented and evidence-based teaching
- Well quipped practical labs
- Well-equipped class rooms infrastructure
- Active Guidance/ Advisory process for students
- Extra-curricular activities

### **3.5 Area Requiring Focus**

- Lack of advance purpose-built exercise/skill lab.
- Lack of advance biomechanics/research lab.
- Lack of virtual reality/3D technology integration.
- Inadequate seating capacity in the class rooms
- Training of Junior Faculty members
- Lack of extra-curricular activities for students

Riphah College of Rehabilitation and Allied Health Sciences has identified some improvement that needs to be done on short- and long-term basis. Short Term program development plan, targets the points b, c and e as listed above in weaknesses while long term development plan, targets the points a and d as listed above in the weaknesses:

### **3.6 Standard 1-4**

**The department must assess its overall performance periodically using quantifiable measures.**

#### **3.6.1 Graduates/Undergraduates enrolled in last three years**

Every year, the undergraduate program attracts a large number of students and is run on full capacity. During the last three years, 770 students enrolled in the program.

Following is the data as per requirements listed in standard 1-4 main section:

#### **3.6.2 Student Faculty Ratio**

DPT program has 13:1 student faculty ratio.

#### **3.6.3 Average GPA per Semester**

The average GPA is 2.90

#### **3.6.4 Average Completion Time**

The DPT program has average completion time of 5 years consisting of 10 semesters.

#### **3.6.5 Employer Satisfaction**

Riphah College of Rehabilitation and Allied Health Sciences (**RCR&AHS**) conducted the employer survey to judge their satisfaction level which turned out to be 90%. See Annexure B for cumulative results. To be discussed with QEC

#### **3.6.6 Students Course Evaluation Rate**

Students' course evaluation rate for all courses is 14.15

#### **3.6.7 Research**

The program faculty published research papers in different journals. List of publications is attached in Annexure E.

### 3.6.8 Community Service

Riphah College of Rehabilitation Sciences staff and students worked with Riphah Social Welfare Organization and actively participated in number of community services as listed below:

- Free medical camps in capital territory and different cities of Punjab and KPK.
- Osteoarthritis campaign
- Raising of funds for Syrian war affected cities

## 4.0 Criterion 2: Curriculum Design and Organization

### 4.1 Title of Degree Program

Doctor of Physical Therapy (DPT)

### 4.2 Definition of credit hour:

One credit hour is 1 hour of theory lecture or 3 hours of clinical work in a week.

### 4.3 Degree plan

Following is the complete list of courses taught in the selected program. Section 4.5 shows the details about all the courses taught in DPT program, including pre-requisites and books.

### SCHEME OF STUDIES FOR 5 YEARS

#### DOCTOR OF PHYSICAL THERAPY (DPT) PROGRAM

SEMESTER/YEAR	Course Code	NAME OF SUBJECT	CREDITS
		<b>FIRST PROFESSIONAL YEAR</b>	
<b>FIRST</b>	DPAN614	ANATOMY -I	4(3-1)
	DPPH613	PHYSIOLOGY-I	3(2-1)
	DPKI613	KINESIOLOGY-I	3(2-1)
	DPEN613	ENGLISH-I (FUNCTIONAL ENGLISH)	3(3-0)
	DPPS612	PAKISTAN STUDIES	2(2-0)
	DPCO613	INTRODUCTION TO COMPUTER	3(2-1)

			<b>18</b>
<b>SECOND</b>	DPAN624	ANATOMY -II	4(3-1)
	DPPH623	PHYSIOLOGY-II	3(2-1)
	DPKI623	KINESIOLOGY-II	3(2-1)
	DPEN623	ENGLISH-II (COMMUNICATION SKILLS)	3(3-0)
	DPIS612	ISLAMIC STUDIES / ETHICS	2(2-0)
	DPSO612	SOCIOLOGY	2(2-0)
			<b>17</b>
		<b>SECOND PROFESSIONAL YEAR</b>	
<b>THIRD</b>	DPRN633	ENGLISH-III (TECHNICAL WRITING & PRESENTATION SKILLS)	3(3-0)
	DPCO613	MEDICAL PHYSICS	3(2-1)
	DPAN633	ANATOMY -III	3(2-1)
	DPPH633	PHYSIOLOGY-III	3(2-1)
	DPBE613	BIOMECHANICS & ERGONOMICS-I	3(3-0)
	DPBC612	BIOCHEMISTRY I	2(2-0)
			<b>17</b>
<b>FOURTH</b>	DPAN643	ANATOMY -IV (NEURO ANATOMY)	3(2-1)
	DPBE623	BIOMECHANICS & ERGONOMICS-II	3(2-1)
	DPHE612	HEALTH & WELNESS	2(3-0)
	DPBG623	BIOCHEMISTRY & GENETICS II	3(2-1)
	DPEP643	EXERCISE PHYSIOLOGY	3(3-1)
	DPMB612	MOLECULAR BIOLOGY & GENETICS	2(2-0)
			<b>16</b>
		<b>THIRD PROFESSIONAL YEAR</b>	

<b>FIFTH</b>	DPPM612	PATHOLOGY & MICROBIOLOGY I	2(2-0)
	DPPR612	PHARMACOLOGY I	2(2-0)
	DPPE613	PHYSICAL AGENTS & ELECTROTHERAPY -I	3(2-1)
	DPTE613	THERAPEUTIC EXERCISES & TECHNIQUES I	3(2-1)
	DPBI613	BIOSTATISTICS I	3(3-0)
	DPBS612	BEHAVIORAL SCIENCES (PSYCHOLOGY & ETHICS)	2(2-0)
	DPPC613	SUPERVISED CLINICAL PRACTICE I	3(0-3)
			<b>18</b>
<b>SIXTH</b>	DPPM623	PATHOLOGY & MICROBIOLOGY II	3(2-1)
	DPPR622	PHARMACOLOGY & THERAPEUTICS II	2(2-0)
	DPPE623	PHYSICAL AGENTS & ELECTROTHERAPY -II	3(2-1)
	DPIR613	INTRODUCTION TO REVEALED SCIENCES	3(3-0)
	DPCM613	COMMUNITY MEDICINE & REHABILITATION	3(3-0)
	DPCP623	SUPERVISED CLINICAL PRACTICE II	3(0-3)
			<b>17</b>
		<b>FOURTH PROFESSIONAL YEAR</b>	
<b>SEVENTH</b>	DPME613	MEDICINE I	3(3-0)
	DPSU613	SURGERY I	3(3-0)
	DPRD613	RADIOLOGY & DIAGNOSTIC IMAGING	3(2-1)
	DPMU613	MUSCULOSKELETAL PHYSICAL THERAPY	3(2-1)
	DPEB613	EVIDENCE BASED PRACTICE	3(2-1)
	DPCP633	SUPERVISED CLINICAL PRACTICE III	3(0-3)
			<b>18</b>
<b>EIGHT</b>	DOME623	MEDICINE II	3(3-0)

	DPSU623	SURGERY II	3(3-0)
	DPNE613	NEUROLOGICAL PHYSICAL THERAPY	3(2-1)
	DPSI613	SCIENTIFIC INQUIRY & RESEARCH METHODOLOGY	3(2-1)
	DPEP613	EMERGENCY PROCEDURES & PRIMARY CARE IN PHYSICAL THERAPY	3(2-1)
	DPCP643	SUPERVISED CLINICAL PRACTICE IV	3(0-3)
			<b>18</b>
		<b>FIFTH PROFESSIONAL YEAR</b>	
<b>NINTH</b>	DPCA613	CARDIOPULMONARY PHYSICAL THERAPY	3(2-1)
	DPPO612	PROSTHETICS & ORTHOTICS	2(2-0)
	DPCD613	CLINICAL DECISION MAKING & DIFFERENTIAL DIAGNOSIS	3(3-0)
	DPMT613	MANUAL THERAPY	3(2-1)
	DPPP612	PROFESSIONAL PRACTICE (LAWS, ETHICS, ADMINISTRATION)	2(2-0)
	DPIN612	INTEGUMENTARY PHYSICAL THERAPY	2(2-0)
	DPCP653	SUPERVISED CLINICAL PRACTICE V	3(0-3)
			<b>18</b>
<b>TENTH</b>	DPGO612	OBSTETRICS & GYNAECOLOGY PHYSICAL THERAPY	2(2-0)
	DPPA612	PAEDIATRIC PHYSICAL THERAPY	2(2-0)
	DPGE612	GERONTOLOGY & GERIATRIC PHYSICAL THERAPY	2(2-0)
	DPSP612	SPORTS PHYSICAL THERAPY	2(2-0)
	DPCP664	SUPERVISED CLINICAL PRACTICE VI	4(0-4)

	DPRP616	RESEARCH PROJECT	6
			<b>18</b>
		<b>TOTAL CREDITS</b>	<b>175</b>

#### 4.4 Course Information

##### ANATOMY- I

**CREDIT HOURS: 4(3-1)**

##### COURSE DESCRIPTION

The focus of this course is an in-depth study and analysis of the general and regional organization of the human body. Emphasis is placed upon structure and function of human movement. A comprehensive study of human anatomy histology, embryology, with emphasis on the nervous, musculoskeletal, and circulatory systems is incorporated. Introduction to general anatomy lays the foundation of the course. Dissection and identification of structures in the cadaver supplemented with the study of charts, models, prosected materials and radiographs are utilized to identify anatomical landmarks and configurations of the upper limb.

##### RECOMMENDED BOOKS

1. Gray's Anatomy by Prof. Susan Standing 41st Ed., Elsevier.
2. Clinical Anatomy for Medical Students by Richard S. Snell.
3. Clinically Oriented Anatomy by Keith Moore.
4. General Anatomy by Prof.
5. Ghulam Ahmad, latest Ed.
6. Clinical Anatomy by R. J. Last, Latest Ed.
7. Cunningham's Manual of Practical Anatomy by G. J. Romanes, 15th Ed., Vol-I, II and III.
8. The Developing Human. Clinically Oriented Embryology by Keith L. Moore, 6th Ed.
9. Wheater's Functional Histology by Young and Heath, Latest Ed.
10. Medical Histology by Prof. Laiq Hussain.
11. Neuroanatomy by Richard S. Snell 7th edition.
12. Jancquera textbook of histology
13. Colour atlas of histology by defiero
14. Langman's embryology
15. Clinically oriented developmental anatomy by K.L.Moore

**PHYSIOLOGY- I****CREDIT HOUR: 3(2-1)****COURSE DESCRIPTION**

The course is designed to study the function of the human body at the cellular, tissue and systems levels. The course will help students in understanding the complexities of the cells, tissues, and major organs and systems of the human body, concentrating on basic mechanisms underlying human life processes and important diseases affecting normal human function

**RECOMMENDED BOOKS**

1. Textbook of Physiology by Guyton and Hall, 12th Ed.
2. Review of Medical Physiology by William F. Ganong, 23rd Ed.
3. Physiology by Berne and Levy, 6th Ed.
4. Human Physiology: The Basis of Medicine by Gillian Pocock, Christopher D. Richards 4th Ed.
5. Physiological Basis of Medical Practice by John B. West and Taylor, 12th Ed.

**KINESIOLOGY- I****CREDIT HOURS: 3(2-1)****COURSE DESCRIPTION**

Course covers the principles of mechanics and anatomy in relation to human movement facilitating students to apply kinesiological evaluation and treatment of muscular imbalance or derangement in their clinical practice. It consists of evaluation of muscular function and group movements of muscle in relation to force of gravity and manual resistance. By becoming familiar with the knowledge of basic mechanical and physiological mechanisms, students will be more confident and competent in using them in use of exercises to promote physical rehabilitation

**RECOMMENDED BOOKS**

1. Practical exercise therapy by Margaret Hollis 3rd Ed. illustrated, reprint, Blackwell Scientific
2. Brunnstrom's Clinical Kinesiology 6th Ed. By. Peggy A Houglum, Dolores B Bertoti
3. Clinical kinesiology and anatomy 5th Ed. by Lynn S Lippert
4. Joint structure and function: a comprehensive analysis 5th Ed. by: Pamela. K. Levangie and Cynthia. C. Norkin.
5. Muscle function testing by: Cunningham and Daniel. 2nd, illustrated
6. Human movement explain by Kimjonas and Karenbaker
7. The principles of exercise therapy by: M. Dena Gardiner, 4th Edition.



**ENGLISH- I (FUNCTIONAL ENGLISH)****CREDIT HOURS: 3(3-0)****COURSE OBJECTIVES**

Enhance language skills and develop critical thinking

**COURSE CONTENTS**

- Basics of Grammar
- Parts of speech and use of articles
- Sentence structure, active and passive voice
- Practice in unified sentence
- Analysis of phrase, clause and sentence structure
- Transitive and intransitive verbs
- Punctuation and spelling.

**RECOMMENDED BOOKS**

Grammar

- Practical English Grammar by A. J. Thomson and A. V. Martinet. Exercises 1. Third edition. Oxford University Press. 1997. ISBN 0194313492
- Practical English Grammar by A. J. Thomson and A. V. Martinet. Exercises 2. Third edition. Oxford University Press. 1997. ISBN 0194313506
- Writing
- Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Francoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 0 19 435405 7 Pages 20-27 and 35-41.
- Reading/Comprehension
- Reading. Upper Intermediate. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 453402 2.
- Speaking

**PAKISTAN STUDIES (COMPULSORY)****CREDIT HOURS: 2(2-0)****COURSE OBJECTIVES**

- Develop vision of historical perspective, government, politics, Contemporary Pakistan, ideological background of Pakistan.
- Study the process of governance, national development, issues arising in the modern age and posing challenges to Pakistan.

**RECOMMENDED BOOKS**

- Burki, Shahid Javed. State & Society in Pakistan, The Macmillan Press Ltd 1980.
- Akbar, S. Zaidi. Issue in Pakistan's Economy. Karachi: Oxford University Press, 2000.
- S. M. Burke and Lawrence Ziring. Pakistan's Foreign policy: An Historical analysis. Karachi: Oxford University Press, 1993.
- Mehmood, Safdar. Pakistan Political Roots & Development. Lahore, 1994.
- Wilcox, Wayne. The Emergence of Bangladesh., Washington: American Enterprise, Institute of Public Policy Research, 1972.
- Mehmood, Safdar. Pakistan Kayyun Toota, Lahore: Idara-e-Saqafat-e-Islamia, Club Road, nd.
- Amin, Tahir. Ethno - National Movement in Pakistan, Islamabad: Institute of Policy Studies, Islamabad.
- Ziring, Lawrence. Enigma of Political Development. Kent England: Wm Dawson & sons Ltd, 1980.
- Zahid, Ansar. History & Culture of Sindh. Karachi: Royal Book Company, 1980.
- Afzal, M. Rafique. Political Parties in Pakistan, Vol. I, II & III. Islamabad: National Institute of Historical and cultural Research, 1998.
- Sayeed, Khalid Bin. The Political System of Pakistan. Boston: Houghton Mifflin, 1967.
- Aziz, K.K. Party, Politics in Pakistan, Islamabad: National Commission on Historical and Cultural Research, 1976.
- Muhammad Waseem, Pakistan under Martial Law, Lahore: Vanguard, 1987.
- Haq, Noor ul. Making of Pakistan: The Military Perspective. Islamabad: National Commission on Historical and Cultural Research, 1993.

## **INTRODUCTION TO COMPUTERS**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This is an introductory course on Information and Communication Technologies. Topics include ICT terminologies, hardware and software components, the internet and World Wide Web, and ICT based applications

### **RECOMMENDED BOOKS**

1. Introduction to Computers by Peter Norton, 6th International Edition (McGraw HILL)
2. Using Information Technology: A Practical Introduction to Computer & Communications by Williams Sawyer, 6th Edition (McGraw HILL)

3. Computers, Communications & information: A user's introduction by Sarah E. Hutchinson, Stacey C. Swayer
4. Fundamentals of Information Technology by Alexis Leon, Mathewsleon Leon press.

## **ANATOMY- II**

**CREDIT HOURS: 4(3-1)**

### **COURSE DESCRIPTION**

The focus of this course is an in-depth study and analysis of the regional and systemic organization of the body. Emphasis is placed upon structure and function of human movement. A comprehensive study of human anatomy with emphasis on the nervous, musculoskeletal and circulatory systems is incorporated. Introduction to general anatomy lays the foundation of the course. Dissection and identification of structures in manikins/smart board systems supplemented with the study of charts, models, prosected materials and radiographs are utilized to identify anatomical landmarks and configurations of the lower limb, abdomen and pelvis.

### **RECOMMENDED BOOKS**

1. Gray's Anatomy by Prof. Susan Standing 41st Ed., Elsevier.
2. Clinical Anatomy for Medical Students by Richard S. Snell.
3. Clinically Oriented Anatomy by Keith Moore.
4. General Anatomy by Prof. Ghulam Ahmad, latest Ed.
5. Clinical Anatomy by R. J. Last, Latest Ed.
6. Cunningham's Manual of Practical Anatomy by G.J.Romanes, 15th Ed., Vol-I, II and III.
7. The Developing Human. Clinically Oriented Embryology by Keith L. Moore, 6th Ed.
8. Wheater's Functional Histology by Young and Heath, Latest Ed.
9. Medical Histology by Prof. Laiq Hussain.
10. Neuroanatomy by Richard S. Snell 7th edition.
11. Jancquera textbook of histology
12. Colour atlas of histology by defiero
13. Langman's embryology
14. Clinically oriented developmental anatomy by K.L.Moore

## **PHYSIOLOGY- II**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

The course is designed to study the function of the human body at the molecular, cellular, tissue and systems levels. These topics are addressed by a consideration of the cardiovascular,

gastrointestinal, and endocrinological systems. The integrative nature of physiological responses in normal function and disease is stressed throughout the course

#### **RECOMMENDED BOOKS**

1. Textbook of Physiology by Guyton and Hall, 12th Ed.
2. Review of Medical Physiology by William F. Ganong, 23rd Ed.
3. Physiology by Berne and Levy, 6th Ed.
4. Human Physiology: The Basis of Medicine by Gillian Pocock, Christopher D. Richards 4th Ed.
5. Physiological Basis of Medical Practice by John B. West and Taylor, 12th Ed.

#### **KINESIOLOGY-II**

**CREDIT HOURS: 3(2-1)**

#### **COURSE DESCRIPTION**

The course covers the types of human motions in relation to axes and planes. It further explores the inter-relationship among kinematic variables and motion analysis

#### **RECOMMENDED BOOKS**

1. Practical exercise therapy by Margaret Hollis 3rd Ed. illustrated, reprint, Blackwell Scientific
2. Brunnstrom's Clinical Kinesiology 6th Ed. By. Peggy A Houglum, Dolores B Bertoti
3. Clinical kinesiology and anatomy 5th Ed. by Lynn S Lippert
4. Joint structure and function: a comprehensive analysis 5th Ed. by: Pamela. K. Levangie and Cynthia. C. Norkin.
5. Muscle function testing by: Cunningham and Daniel. 2nd, illustrated
6. Human movement explain by kimjonas and karenbaker
7. The principles of exercise therapy by: M. Dena Gardiner, 4th Edition.

#### **ENGLISH II (COMMUNICATION SKILLS)**

**CREDIT HOURS: 3(3-0)**

#### **COURSE OBJECTIVES**

Enable the students to meet their real-life communication needs.

#### **RECOMMENDED BOOKS**

Grammar

- Practical English Grammar by A. J. Thomson and A. V. Martinet. Exercises 2. Third edition. Oxford University Press 1986. ISBN 0 19 431350 6.
- Writing

- Writing. Intermediate by Marie-ChristineBoutin, Suzanne Brinand and Francoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 019 435405 7 Pages 45-53 (note taking).
- Writing. Upper-Intermediate by Rob Nolasco. Oxford Supplementary Skills. Fourth Impression 1992. ISBN 0 19 435406 5 (particularly good for writing memos, introduction to presentations, descriptive and argumentative writing).

### **Reading**

- Reading. Advanced. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1991. ISBN 019 453403 0.
- Reading and Study Skills by John Langan
- Study Skills by RiachardYorky.

## **ISLAMIC STUDIES / ETHICS**

**CREDIT HOURS: 2(2-0)**

### **COURSE OBJECTIVES**

- To provide Basic information about Islamic Studies
- To enhance understanding of the students regarding Islamic Civilization
- To improve Students skill to perform prayers and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life

### **RECOMMENDED BOOKS**

- Hameed ullah Muhammad, "Emergence of Islam" , IRI, Islamabad
- Hameed ullah Muhammad, "Muslim Conduct of State"
- Hameed ullah Muhammad, Introduction to Islam
- Mulana Muhammad YousafIslahi,"
- Hussain Hamid Hassan, "An Introduction to the Study of Islamic Law" leaf Publication Islamabad, Pakistan.
- Ahmad Hasan, "Principles of Islamic Jurisprudence" Islamic Research Institute, International Islamic University, Islamabad (1993)
- Mir Waliullah, "Muslim Jrisprudence and the Quranic Law of Crimes" Islamic Book Service (1982)
- H. S. Bhatia, "Studies in Islamic Law, Religion and Society" Deep & Deep Publications, New Delhi (1989)

- Dr. Muhammad Zia-ul-Haq, "Introduction to Al Sharia Al Islamia" Allama Iqbal Open University, Islamabad (2001)

## **SOCIOLOGY**

**CREDIT HOURS: 2(2-0)**

### **COURSE DESCRIPTION**

The course focuses at providing basic concepts and models of health sciences. The psycho-socio and cultural assessment of health seeking behavioral patterns and the role of therapeutic management group will be examined. The indigenous healing system and contemporary medical system will be studied. It makes them realize the importance of the relationship of the physical therapist and the patient

### **RECOMMENDED BOOKS**

1. Sociology for Physiotherapists (2006) by Bid Dibyendunarayan Jaypee publisher
2. A.P Dixit (2005) Global Hiv/Aids Trends, Vista International Publications house New Delhi
3. Diarmuid O Donovan (2008) The State of Health Atlas University of California Press
4. G.C. Satpalhy (2003) Prevention of Hiv/Aids & Drug abuse, isha Books, New Delhi.
5. Global Health Challenges for Human Security (ed.) Lincoln Chen et el. Global Equity. UK 2003.
6. Jai P Narain (2004) Aids in Asia the challenge a head , Sage Publications New Delhi;
7. Julia A Ericksen (2008) Taking charge of Breast Cancer University of California Press;
8. Meena Sharma (2006) Aids, Awareness Through Community Participation Kalpaz Publications Delhi;
9. P Dixit (2005) Global HIV/AIDS Trends, Vista International Publishing House Delhi 110053;
10. Rose Weitz (2004) The Sociology of health, Illness & health care a critical approach Thomson wads worth.
11. RubinaSehgal(2004)The Trouble Times; Sustainable Development in the age of extreme. Islamabad.

## **ENGLISH-III**

**CREDIT HOURS: 3(3-0)**

### **(TECHNICAL WRITING AND PRESENTATION SKILLS)**

### **COURSE OBJECTIVES**

Enhance language skills and develop critical thinking

## **RECOMMENDED BOOKS**

### **Essay Writing and Academic Writing**

1. Writing. Advanced by Ron White. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 435407 3 (particularly suitable for discursive, descriptive, argumentative and report writing).
2. College Writing Skills by John Langan. Mc-Graw-Hill Higher Education. 2004.
3. Patterns of College Writing (4th edition) by Laurie G. Kirsznar and Stephen R. Mandell. St. Martin's Press.

### **Presentation Skills**

### **Reading**

1. The Mercury Reader. A Custom Publication. Compiled by Northern Illinois University. General Editors: Janice Neulib; Kathleen Shine Cain; Stephen Ruffus and Maurice Scharton. (A reader which will give students exposure to the best of twentieth century literature, without taxing the taste of engineering students)

## **MEDICAL PHYSICS**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course will cover the basic principle of physics which are applicable in medical equipment used in Physical therapy. It also covers the fundamentals of currents, sound waves, electromagnetic radiations and their effects & application in physical therapy

### **RECOMMENDED BOOKS**

1. Clayton's Electrotherapy and actinotherapy by: P. M Scott.
2. Medical physics for physical therapists by: A. D Moore.
3. Preliminary Electricity for Physiotherapists by B. Savage.
4. Basic Electronics by Grob.
5. Principles of Bio-instrumentation by Richard A. Normann.
6. Hand book of Biomedical Instrumentation by R. S. Khanpur
7. Basic Radiation Protection Technology by Gollnick

## **ANATOMY-III**

**CREDIT HOURS: 4(3-1)**

### **COURSE DESCRIPTION**

The focus of this course is an in-depth and comprehensive study of human anatomy with emphasis on the head and neck, face and skull. Identify anatomical structures within the thorax

with emphasis on structures of thoracic wall and thoracic cavity. Dissection and identification of structures in the manikins/smart board system supplemented with the study of charts, models, prosected materials and radiographs are utilized to identify anatomical landmarks and configurations of the head and neck, face, skull and thorax.

#### **RECOMMENDED BOOKS**

1. Gray's Anatomy by Prof. Susan Standring 39th Ed., Elsevier.
2. Clinical Anatomy for Medical Students by Richard S. Snell.
3. Clinically Oriented Anatomy by Keith Moore.
4. Clinical Anatomy by R. J. Last, Latest Ed.
5. Cunningham's Manual of Practical Anatomy by G.J.Romanes, 15th Ed., Vol-I, II and III.
6. The Developing Human. Clinically Oriented Embryology by Keith L. Moore, 6th Ed.
7. Wheater's Functional Histology by Young and Heath, Latest Ed.
8. Medical Histology by Prof. Laiq Hussain.
9. Neuroanatomy by Richard S. Snell.

#### **PHYSIOLOGY-III**

**CREDIT HOURS: 3(2-1)**

##### **COURSE DESCRIPTION**

The course is designed to study the function of the human body with emphasis on function of human respiratory system, nervous system, reproductive system, body fluids and renal system. These topics are addressed by a consideration of clinical and applied physiology in relation to clinical modules and practice.

#### **RECOMMENDED BOOKS**

1. Textbook of Physiology by Guyton and Hall, Latest Ed.
2. Review of Medical Physiology by William F. Ganong, Latest Ed.
3. Physiology by Berne and Levy, Latest Ed.
4. Human Physiology: The Basis of Medicine by Gillian Pocock, Christopher D. Richards
5. Physiological Basis of Medical Practice by John B. West and Taylor, 12th Ed.

#### **BIOMECHANICS AND ERGONOMICS – I**

**CREDIT HOURS: 3(3-0)**

##### **COURSE DESCRIPTION**

This course aims to develop appreciation of how mechanical principles can be applied to understand the underlying causes of human movement. It also examines selected anatomical, structural and functional properties of human connective, muscular, and nervous tissues, as well



as skeletal structures. Emphasis is placed on the mechanical, neuroregulatory, and muscular events that influence normal and pathological motion

This course will also help to gain an understanding of basic theoretical concepts, principles and techniques of ergonomics as well as an introduction to fundamental ergonomic measurement tools for assessment of physical workload, posture, occupational exposure, and stress

#### **RECOMMENDED BOOKS**

1. Basic biomechanics of musculoskeletal system By: Nordin & Frankel, 3rd edition.
2. Basic Biomechanics, By: Susan J. Hall 4th edition.
3. Additional study material as assigned by the tutor.
4. Ergonomics for the therapist by Karen Jacobs 3rd edition mosby and Elsevier publishers

#### **BIOCHEMISTRY-I**

**CREDIT HOURS: 2(2-0)**

##### **COURSE DESCRIPTION**

This course provides the knowledge and skills in fundamental organic chemistry and introductory biochemistry that are essential for further studies. It covers introduction to the biomolecules i.e. amino acid, proteins carbohydrates, fats, enzymes and nucleic acids. The nutritional biochemistry concludes the course

#### **RECOMMENDED BOOKS**

1. Harper's Biochemistry by Robbert K. Murray, Daryl K. Granner, Peter A. Mayes, Victor W. Rodwell, Latest Ed.
2. Lippincott's Illustrated Review of Biochemistry by Pamela C. Champe and Richard A. Harvey, Latest Ed.
3. Practical Clinical Biochemistry by Varley.
4. Textbook of Biochemistry by Devlin, 5th Ed.
5. Textbook of Medical Biochemistry Vol-I and II by M.A. Hashmi. Biochemistry by Stryer, Lubert, Latest Ed.

#### **ANATOMY - IV (Neuro Anatomy)**

**CREDIT HOURS: 3(2-1)**

##### **COURSE DESCRIPTION**

The purpose of the course is to provide the students an in-depth study and analysis of the regional and systemic organization of the body. Course will emphasis on structure and function of human movement. Course will cover human anatomy with emphasis on the nervous, skeletal, muscle, and circulatory systems. Course will lay down the foundation of General Anatomy, the understanding of Neuroanatomy (regional Anatomy) to be supplemented through dissection and

identification of structures in the manikins/smart boards, charts, models, prosected materials and radiographs

### **RECOMMENDED BOOKS**

1. Gray's Anatomy by Prof. Susan Standring 41th Ed., Elsevier.
2. Clinical Neuroanatomy Anatomy for Medical Students by Richard S. Snell,
3. Clinically Oriented Anatomy by Keith Moore.
4. Clinical Anatomy by R.J. Last, Latest Ed.
5. Cunningham's Manual of Practical Anatomy by GJ.Romanes, 15th Ed., Vol-I, II and III.

## **BIOMECHANICS AND ERGONOMICS-II**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course aims to develop appreciation of how mechanical principles can be applied to understand the underlying causes of human movement. This course will also help to gain an understanding of basic theoretical concepts, principles and techniques of ergonomics as well as an introduction to fundamental ergonomic measurement tools for assessment of physical workload, posture, occupational exposure, and stress

### **RECOMMENDED BOOKS**

1. Basic biomechanics of musculoskeletal system By: Nordin& Frankel, 3rd edition.
2. Basic Biomechanics, By: Susan J. Hall 4th edition.
3. Additional study material as assigned by the tutor.
4. Ergonomics for the therapist by Karen Jacobs 3rd edition Mosby and Elsevier publishers.

## **HEALTH & WELLNESS**

**CREDIT HOURS: 2(2-0)**

### **COURSE DESCRIPTION**

This course will facilitate discussion on the theories of health and wellness, including motivational theory, locus of control, public health initiative, psycho-social, spiritual and cultural. The course will cover health risks, screening, and assessment considering epidemiological principles. This will also cover risk reduction strategies for primary and secondary prevention, including programs for special populations

### **RECOMMENDED BOOKS**

1. A Physical Therapist's Guide to Health, Fitness, and Wellness, By Catherine R Thompson, PhD, MS, PT.

**BIOCHEMISTRY-II****CREDIT HOURS: 3(2-1)****COURSE DESCRIPTION**

This course will provide the knowledge and skills in fundamental organic chemistry and introductory biochemistry that are essential for further studies. It will also cover the basic biochemical, cellular, biological and microbiological processes, basic chemical reactions in the prokaryotic and eukaryotic cells, the structure of biological molecules, introduction to the nutrients i.e. carbohydrates, fats, enzymes, nucleic acids and amino acids. The course also covers the section of nutritional biochemistry

**RECOMMENDED BOOKS**

1. Harper's Biochemistry by Robbert K. Murray, Daryl K. Granner, Peter A. Mayes, Victor W. Rodwell, Latest Ed.
2. Lippincott's Illustrated Review of Biochemistry by Pamela C. Champe and Richard A. Harvey, Latest Ed.
3. Practical Clinical Biochemistry by Varley.
4. Textbook of Biochemistry by Devlin, 5th Ed.
5. Textbook of Medical Biochemistry Vol-I and II by M. A. Hashmi. Biochemistry by Stryer, Lubert, Latest Ed.

**EXERCISE PHYSIOLOGY****CREDIT HOURS: 3(2-1)****COURSE DESCRIPTION**

This course aims to develop a critical appreciation of exercise and applied physiology. The course will also enable the readers to understand injury prevention, rehabilitation and performance enhancement strategies.

**RECOMMENDED BOOKS**

1. Exercise Physiology- Theory and Application to Fitness and Performance by: Scott K. Powers, Edward T. Howley.
2. Exercise physiology, A thematic Approach By: Tudor Hale, University College Chichester, UK.
3. Additional study material as assigned by the tutor.

**MOLECULAR BIOLOGY & GENETICS****CREDIT HOURS: 2(2-0)****COURSE DISCRIPTION**

This course covers the brief overview of the cellular & molecular biology, membrane physiology,

introduction to molecular medicine and gene therapy, nuclear transplantation, gene therapy for neurological disorders, gene therapy for musculoskeletal disorders and the concept of molecular medicine in physical therapy.

This course has been designed to address a more in-depth study of biology of inheritance and inheritance patterns. This course focuses on classical Mendelian genetics, the DNA molecule and molecular genetics, and population genetics. The course also covers Human genome and Molecular Pathology.

### **RECOMMENDED BOOKS**

1. Molecular Medicine: Genomics to Personalized Healthcare, 3rd Edition by R. Trent. (Published in 2005 by Academic Press).
2. Principles of Molecular Medicine, 2nd Edition by Marshall S. Runge and Cam Patterson. (Published in 2006 by Humana Press).
3. Molecular Neuropharmacology: A Foundation for Clinical Neuroscience, 2nd Edition by Eric J. Nestler, Steven E. Hyman and Robert C. Malenka. (Published in 2008 by McGraw-Hill Professional).
4. Molecular Medicine: An Introductory Text, 3rd Edition by R. J. Trent. (Published in 2005 by Academic Press).
5. Molecular Biology of the Cell, 5th Edition by Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts and Peter Walter. (Published in 2007 by Garland Science).
6. Human Molecular Genetics, 3rd Edition by Tom Strachan and Andrew Read. (Published in 2003 by Garland Science/Taylor & Francis Group).
7. Molecular Medicine for Clinicians, 1st Edition by Barry Mendelow, Michele Ramsay, Nanthakumar Chettyan and Wendy Stevens. (Published in 2008 by University Press).
8. Molecular Markers, Natural History and Evolution, 2nd Edition by John C. Avise. (Published in 2004 by Sinauer Associates).
9. "Molecular Pathology: The Molecular Basis of Human Disease, 1st Edition by William B. Coleman, and Gregory J. Tsongalis. (Published in 2009 by Academic Press).
10. Additional Study Material as assigned By the tutor.
11. Genetics: A Conceptual Approach, 3rd Edition by Benjamin Pierce (Published in 2007 by W. H. Freeman).
12. Human Molecular Genetics, 3rd Edition by Tom Strachan and Andrew P Read (Published in 2003 by Garland Science/Taylor & Francis Group).

13. Genetics-From Genes to Genomes, 3rd Edition by Hartwell, Hood, Goldberg, Reynolds, Silver and Veres (Published in 2006 by McGraw-Hill).
14. Additional Study Material, as assigned by the tutor.

## **PATHOLOGY & MICROBIOLOGY-I**

**CREDIT HOURS: 2(2-0)**

### **COURSE DESCRIPTION**

The course will develop an understanding among students about the pathology of underlying clinical disease states and involving the major organ systems. Epidemiological issues will be presented and discussed. Students will use problem-solving skills and information about pathology and Microbiology to decide when referred to another health care provider or alternative intervention is indicated.

### **RECOMMENDED BOOKS**

1. Goodman CC & Fuller KS. Pathology: implication for the Physical Therapist. 4th ed. Elsevier:USA;2015
2. Kumar V, Abbas AK & Aster JC. Robbins basic pathology. 9th ed. Elsevier: Philadelphia; 2013.
3. Levinson W. review of medical microbiology & immunology. 14th ed. McGraw-Hill: Canada; 2016
4. Thomson AD & Cotton RE. Lecture notes on pathology. 3rd ed. FA Davis; 1983

## **PHARMACOLOGY & THERAPEUTICS- I**

**CREDIT HOURS: 2(2-0)**

### **COURSE DESCRIPTION**

This course deals with pharmacodynamics, pharmacokinetics, clinical/therapeutic uses and toxicology of drugs. Emphasis is given on how a drug works to anticipate when giving a drug to a patient are of paramount importance include administering drugs, calculating medication dosages based on given setting, assessing drug effects, intervening to make a drug more tolerable, and providing teaching about drugs and the drug regimen.

### **RECOMMENDED BOOKS**

1. Ciccone CD. Pharmacology in rehabilitation. 5th ed. United states: Cardiopulmonary Perspectives in Rehabilitation; 2015.
2. Whalen K, Finkel R & Panavelli TA, editors. Lippincott illustrated reviews: pharmacology. 6th ed. Philadelphia: Wolters Kluwer; 2015
3. Cheema M. multi author textbook of pharmacology and therapeutics. Lahore: National Medical Publication; 2015: 1.

4. Cheema M. multi author textbook of pharmacology and therapeutics. Lahore: National Medical Publication; 2015: 2

## **PHYSICAL AGENTS & ELECTROTHERAPY-I**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course deals with the Physical principle associated with Electrotherapy and methods used in the field of Physical Therapy.

### **RECOMMENDED BOOKS**

1. Savage B. Practical electrotherapy for physiotherapists. UK: Faber; 1960.
2. Scott PM. Clayton's electrotherapy and actinotherapy. 7th ed. USA: Williams & Wilkins; 1980.
3. Watson T. Electrotherapy: evidence-based practice. 12th ed. Edinburgh: Churchill Livingstone; 2008
4. Cameron MH. Physical agents in rehabilitation: from research to practice. 4th ed. St. Louis: Elsevier; 2013.
5. Singh J. Textbook of electrotherapy. 2nd ed. India: Jaypee; 2012

## **THERAPEUTIC EXERCISES & TECHNIQUES**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course presents anatomical and physiological principles to allow students to develop integrated therapeutic exercise interventions. Students have the opportunity to develop an acquired understanding of physiological responses to various types of training and develop skills in prescription, implementation, and modeling of exercise programs. Exercise components of strength, aerobic/ anaerobic conditioning, flexibility, balance and stage of healing/rehabilitation are examined. Evidence of appropriate, safe and effective exercise design and proper exercise biomechanics and prescription parameters are addressed with all interventions. Exercise considerations for special populations and across the age span are covered. Concepts are presented in lecture and practiced in the laboratory

### **RECOMMENDED BOOKS**

1. Kisner C & Colby LA. Therapeutic exercise: foundations & techniques. 6th ed. Philadelphia: FA Davis; 2012.
2. Bandy WD & Sanders B. Therapeutic Exercise for physical therapist assistants: techniques for intervention. 3rd ed. Wolters Kluwer; 2012.

3. Sullivan PE and Markos PD. Clinical decision making in therapeutic exercise. Appleton & Lange; 1994.
4. Connolly BH & Montgomery P. Therapeutic exercise in developmental disabilities. 3rd ed. Slack; 2004.

## **BIOSTATISTICS-I**

**CREDIT HOURS: 3(3-0)**

### **COURSE DESCRIPTION**

It involves selection of appropriate statistical techniques to address questions of medical relevance; select and apply appropriate statistical techniques for managing common types of medical data; use various software packages for statistical analysis and data management; interpret the results of statistical analyses and critically evaluate the use of statistics in the medical literature; communicate effectively with statisticians and the wider medical community, in writing and orally through presentation of results of statistical analyses; explore current and anticipated developments in medical statistics.

### **RECOMMENDED BOOKS**

1. Walpole RE. Students study guide: introduction to statistics. 3rd ed. 1982.
2. Muhammad F. Statistical methods and data analysis. Faisalabad: KitabMarkaz; 2000
3. R. L Ott, Micheal T longnecker. An introduction to statistical methods and data analysis, 7th ed. Brooks/Cole, Cengage Learning 2015

## **BEHAVIOURAL SCIENCES (PSYCHOLOGY & ETHICS)**

**CREDIT HOURS: 2(2-0)**

### **COURSE DESCRIPTION**

- This course is designed to increase awareness of psychosocial issues faced by individuals and their significant reference groups at various points on the continuum of health and disability. Personal and professional attitudes and values are discussed as they relate to developing therapeutic relationships. Communication skills are emphasized for effective interaction with clients, health-care professionals and others.

### **RECOMMENDED BOOKS**

1. Rana MH, Ali S & Mustafa M. A handbook of behavioral sciences for medical and dental students. 2nd ed. Lahore : university of health sciences; 2013.
2. Dowrick C. Medicine in society: behavioral sciences for medical students. CRC Press; 2001
3. Billingham KA, Feldman HS & Lopez MA. Developmental psychology for health care preffession. Michigan: westviewpress ;1982.

4. Purtilo RB & Doherty RF. Ethical dimensions: in the health professions. 6th ed. St. Louis: Elsevier; 2016
5. Veatch RM. Medical ethics. 2nd ed. USA: Jones & Bartlett. 1997

## **SUPERVISED CLINICAL PRACTICE-I**

**CREDIT HOURS: 3(0-3)**

### **HISTORY TAKING**

#### **COURSE DESCRIPTION**

During this supervised clinical practice, students are responsible for learning the art of history taking, the first interaction with patient. Students learn the skills under supervision of trained physical therapists. Students become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of patients (surgical, non-surgical, pediatric, geriatric, etc.).

The emphasis is placed on general history taking skills as well as its pertinence to all systems (musculoskeletal, Integumentary, cardiovascular, pulmonary, and neurological.) Student is required to keep a performance record of all listed competencies and successfully perform on real patients during the final evaluation of the course.

## **PATHOLOGY & MICROBIOLOGY-II**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course will cover the basic concepts, terminology, etiology, and characteristics of pathological processes. The course includes the diseases of the Integumentary System, Cardiovascular System, the Lymphatic System, the Respiratory System, the Nervous System, and Pathology of the musculoskeletal System, Pathology of Aging and medical microbiology. Also help the student to provide with a working knowledge of clinical pathology lab importance in Physical Therapy.

#### **RECOMMENDED BOOKS**

1. Pathology: implications for the Physical therapist by: Catherine Cavallaro Goodman, 4th edition
2. Basics & advanced Human Pathology by Robbins 9th edition
3. Lecture notes on Pathology by Thomas and Cotton Published by Blackwell Scientific Publications, Oxford
4. General Pathology by Lord Howard Florey 4th edition by Lloyd-Luke(Medical Books) Ltd
5. Medical Microbiology and Immunology by: Levinson and Jawetz, 9th Ed., Mc Graw-Hill.



**PHARMACOLOGY & THERAPEUTICS-II****CREDIT HOURS: 2(2-0)****COURSE DESCRIPTION**

This course is designed to acquaint the students with the study of properties, effects, and therapeutic value of the primary agents in major drug categories. The topics include pharmacology of the respiratory system, gastrointestinal system, treatments of infectious diseases, and the drugs used in iontophoresis and phonophoresis

**RECOMMENDED BOOKS**

1. Clayton's Electrotherapy and Actinotherapy, 10th edition by PM Scott.
2. Electrotherapy: Evidence based Practice, 11th edition by Shelia Kitchen.
3. Michelle H Cameron's Physical Agent in Rehabilitation: From research to Practice.
4. Electrotherapy and Electrodiagnosis by S. Lient.
5. Applications of Shortwave Diathermy by P. M. Scott.
6. Practical Electrotherapy by Savage.
7. Textbook of Electrotherapy & Practical application by Jagmohen Singh 2nd Edition.

**BIOSTATISTICS-II (UNIVERSITY OPTIONAL)****CREDIT HOURS: 3(3-0)****COURSE DESCRIPTION**

The course is designed to provide the students with the necessary concepts of statistics to enable them to realize a research project in the field of Physiotherapy. It involves selection of appropriate statistical techniques to address questions of medical relevance; select and apply appropriate statistical techniques for managing common types of medical data; use various software packages for statistical analysis and data management; interpret the results of statistical analyses and critically evaluate the use of statistics in the medical literature; communicate effectively with statisticians and the wider medical community, in writing and orally through presentation of results of statistical analyses; explore current and anticipated developments in medical statistics. It is designed to teach entry-level physical therapy students the fundamentals of reading and understanding research methods, design, and statistics.

**RECOMMENDED BOOKS**

1. Walpole, R. E. 1982. —Introduction to Statistics", 3rd Ed., Macmillan Publishing Co., Inc. New York. Muhammad, F. 2005.
2. Statistical Methods and Data Analysis", Kitab Markaz, Bhawana Bazar Faisalabad.

**COMMUNITY BASED MEDICINE & REHABILITATION****CREDIT HOURS 3(3-0)****COURSE DESCRIPTION**

This course is designed for the Physical Therapy students in order to develop strong background knowledge regarding the community health, wellbeing and community based rehabilitation. It also gives knowledge about the issues of community health, policies and procedures for their effective rehabilitation management. It provide awareness about the problems faced by people in community at all levels and effective strategies to solve these issues.

**RECOMMENDED BOOKS**

1. Textbooks of Community Medicine, by Prof. H. A. Siddique (2nd Edition).
2. Parks text book of preventive & social medicine –K Park.
3. Community based rehabilitation worker manual,marion loveday,global health publication.
4. Introduction to Special Education By: Allen and Beacon,(1992), A Simon &Superter Comp. Needham Heights
5. Exceptional Children and Adults, Patton, J.R. (1991); Boston Scott Foresmen and Co.
6. Exceptional Children in Focus by: Patton J.R. (1991); New York, Macmillan pub. Co

**SUPERVISED CLINICAL PRACTICE-II****CREDIT HOURS: 3(0-3)****SYSTEMS REVIEW****COURSE DESCRIPTION**

During this supervised clinical practice, students are responsible for learning the skills of systems review and validate the need for physical therapy services. Students learn to objectively review each system under the supervision of trained physical therapists. Students become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of patients (surgical, non-surgical, pediatric, geriatric, etc.) Student is required to keep a performance record of all listed competencies and successfully perform on real patients during the final evaluation of the course.

**MEDICINE-I****CREDIT HOURS: 3(3-0)****COURSE DESCRIPTION**

- This course intends to familiarize students with medical terminology and abbreviations for efficient and effective chart reviewing and documentation. It also explores systemic diseases, focusing on epidemiology, pathology, histology, etiology, as well as primary and secondary clinical characteristics and their management.

## **RECOMMENDED BOOKS**

1. Practice of medicine by: Davidson.
2. Clinical medicine by: Parveen j Kumar & Michael Clark.
3. Short text book of medicine by: M. Inam Danish.
4. Hutchison's clinical methods by: Michael swash. 21st edition.
5. Bed side techniques.

## **SURGERY-ICREDIT HOURS**

**CREDIT HOURS: 3(3-0)**

### **COURSE DESCRIPTION**

This course intends to familiarize the students with principles of orthopaedic surgery along with detail description of surgical terminologies and abbreviations for efficient and effective chart reviewing and documentation. It also explores various orthopaedic conditions needing surgical attention, focusing on epidemiology, pathology, as well as primary and secondary clinical characteristics and their surgical management.

### **RECOMMENDED BOOKS**

1. Short practice of surgery by Baily and Love's.
2. Text Book of Surgery by Ijaz Ahsan.
3. Outline of Fractures.

## **RADIOLOGY & DIAGNOSTIC IMAGING**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course covers the study of common diagnostic and therapeutic imaging tests. At the end of the course students will be aware of the indications and implications of commonly used diagnostic imaging tests as they pertain to patient's management.

### **RECOMMENDED BOOKS**

1. Looking Within (How X-ray, CT, MRI, Ultrasound and Other Medical Images Created and How They Help Physicians Save Lives) by Anthony Brinton Wolbarst.
2. A-Z of Musculoskeletal and Trauma Radiology By: James R. D. Murray.
3. Essentials of Radiology by Fred. A. Mettler, 2nd edition.
4. Imaging in rehabilitation, By: Terry. R. Malone, Charles Hazle& Michael L. Grey. McGraw Hill Publishers.

## **MUSCULOSKELETAL PHYSICAL THERAPY**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course includes a study of applied anatomy and physiology of the musculoskeletal system and pathological changes of the system and function, including diagnostic tests and measurements. The use of evidence-based physical therapy intervention for musculoskeletal conditions will be emphasized. The course will focus on medical terminologies, clinical examination, evaluation, comparing contemporary, traditional interventions and the impact of evolving technology in the area of musculoskeletal physical therapy

### **RECOMMENDED BOOKS**

1. Therapeutics Exercises and Technique by:Carolyn Kisner& Lynn Allen Colby 4th 5th Ed.
2. Therapeutics Exercises: Techniques for Intervention By: Willim D.Banddy.
3. Clinical decision making in therapeutic exercise By: Patricia e. Sullivan & prudence d. Markos, Appleton & Lange Norwalk, Connecticut.
4. Hertling, D, and Kessler RM. Management of Common Musculoskeletal Disorders: Physical Therapy Principles and Methods. 3rd ed. Philadelphia, PA: WB Saunders 1995.
5. Orthopaedic Physical Therapy By: Donatelli& Michael J. Wooden 4th Edition.
6. Physiotherapy in Orthopaedics, A problem-solving approach By: Atkinson, Coutts & Hassenkamp 2nd Edition.
7. Clinical orthopaedic rehabilitation By S. Brent. Brotzman& Kevin. E. Wilk, 2nd edition, Mosby publishers.
8. Management of Common Musculoskeletal Disorder by: Hertling, D, and Kessler RM Physical Therapy Principles and Methods. 3rd ed. Philadelphia.PA: WB Sunders.
9. Orthopedic Physical Assessment. Magee, D.4th ed. Philadelphia PA: WB Sunders 1995.
10. Physical Rehabilitations Assessments and Treatment". By Susan B,O'Sullivan&Thomas J. Schmitz , 4th edition.
11. Tidy's Physiotherapy by Thomas A Skinner & Piercy.

### **EVIDENCE BASED PRACTICECREDIT HOURS**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course introduces the concept of evidence-based practice in physical therapy including the formulation of answerable clinical questions, methods of obtaining peer-reviewed evidence to those clinical questions, and how to critically appraise evidence once located. Current journal articles, texts, and online resources will be used in the course to develop critical reading and writing skills.

### **RECOMMENDED BOOKS:**

1. Practical Evidence based physiotherapy By, Rob Herbert, GroJamtdvedt, Judy Mead & Kare Birger Hagen.
2. Asking the right question-A guide to critical thinking, 8th Edition By, M. Neil. Browne & Stuart M Keeley.
3. Additional reading material as assigned.

## **SUPERVISED CLINICAL PRACTICE – III**

**CREDIT HOURS: 3(2-1)**

### **MUSCULOSKELETAL**

#### **COURSE DESCRIPTION**

- During this supervised clinical practice, students are responsible for successful execution of examination, evaluation, and interventions relating to musculoskeletal disorders. Students become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of conditions (surgical, non-surgical, pediatric and geriatric).
- Students learn to objectively perform these skills under the supervision of trained physical therapists. Student is required to keep a performance record of all listed competencies and successfully perform on real patients during the final evaluation of the course.

## **MEDICINE-II**

**CREDIT HOURS: 3 (3-0)**

### **COURSE DESCRIPTION**

This course intends to familiarize students with medical terminology and abbreviations for efficient and effective chart reviewing and documentation. It also explores systemic diseases, focusing on epidemiology, pathology, histology, etiology, as well as primary and secondary clinical characteristics and their management. Discusses and integrates subsequent medical and surgical management to formulate appropriate intervention indications, precautions and contraindications.

#### **RECOMMENDED BOOKS**

1. Practice of medicine by: Davidson.
2. Clinical medicine by: Parveen j Kumar & Michael Clark.
3. Short text book by medicine by: M. Inam Danish.
4. Hutchison's clinical methods by: Michael swash. 21st edition

## **SURGERY – II**

**CREDIT HOURS: 3 (3-0)**

## **COURSE DESCRIPTION**

This course intends to familiarize students with principles of surgery along with familiarization with terminology and abbreviations for efficient and effective chart reviewing and documentation. It also explores various conditions needing surgical attention, focusing on epidemiology, pathology, as well as primary and secondary clinical characteristics and their surgical management

## **RECOMMENDED BOOKS**

1. Short practice of surgery by Baily and Love's.
2. Text Book of Surgery by Ijaz Ahsan.
3. Outline of Fractures by David Hamblen, Hamish Simpsons.
4. Outline of orthopedics. By David Hamblen, Hamish Simpsons.

## **NEUROLOGICAL PHYSICAL THERAPY**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course provides an in-depth exploration of the assessment and intervention procedures used with persons with various neurological pathologies. The focus of this course will be on neurological problems acquired in adulthood. Theories of motor control and motor learning will be studied and applied to assessment and treatment. Laboratories will be used to strengthen evaluation and intervention skills, especially the analysis of movement as well as planning, practicing, and modifying treatment. Clinical competence in the evaluation and treatment of persons with neurological impairments is to be developed. It will focus on medical terminology, clinical examination, evaluation, comparing contemporary, traditional interventions and the impact of evolving technology in this area.

### **RECOMMENDED BOOKS**

1. Neurological Physiotherapy Bases of evidence for practice Treatment and management of patients described by specialist clinicians by Cecily Partridge
2. Neurological Physiotherapy A problem-solving approach By Susan Edwards, second edition.
3. Neurologic examination By Robert J. Schwartzman, first edition

## **RESEARCH METHODOLOGY & SCIENTIFIC INQUIRY**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course includes discussion on basic quantitative methods and designs, including concepts of reliability and validity, interpretation of inferential statistics related to research designs, co

relational statistic & designs, interclass correlation coefficients, and critical appraisal of the literature.

#### **RECOMMENDED BOOKS**

1. Essentials of clinical research By Stephan P. Glasser.
2. Rehabilitation Research (Principles and Applications) 3rd Edition By Elizabeth Domholdt.

#### **EMERGENCY PROCEDURES & PRIMARY CARE IN PHYSICAL THERAPY**

**CREDIT HOURS: 2(2-0)**

##### **COURSE DESCRIPTION**

- This course provides the student with all of the skills necessary to take appropriate action in an emergency in any practice setting. Basic life support, first aid and emergency. The course is designed to provide knowledge and skills in emergency techniques and in the application of appropriate action necessary to take care of the patient/client.

#### **RECOMMENDED BOOKS**

1. Emergency Care in Athletic Training by: Keith M. Gorse, Robert O. Blanc, Francis Feld, Matthew Radelet, 1st edition, 2010, F.A Davis Company.
2. Acute care hand book for Physical Therapists by: Jaime C paz, Michelle P West, 2nd edition, 2002, Butterworth Heinemann.

#### **SUPERVISED CLINICAL PRACTICE – IV**

**CREDIT HOURS: 3(0-3)**

##### **NEUROLOGICAL**

##### **COURSE DESCRIPTION**

During this supervised clinical practice, students are responsible for successful execution of examination, evaluation, and interventions relating to neurological disorders. Students become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of conditions (surgical, non-surgical, pediatric and geriatric.) Students learn to objectively perform these skills under the supervision of trained physical therapists. Student is required to keep a performance record of all listed competencies and successfully perform on real patients during the final evaluation of the course.

#### **CARDIOPULMONARY PHYSICAL THERAPY**

**CREDIT HOURS: 3(2-1)**

##### **COURSE DESCRIPTION**

This course includes applied anatomy, applied physiology and pathology of the cardiopulmonary system. This course discuss relevant tests and measures for determining impairment and differentiating the diagnosis based on the specificity and sensitivity of the assessment instruments as related to patients with cardiopulmonary systems disorders. The use of evidence-based physical therapy intervention for cardiopulmonary systems disorders is emphasized. Topics will focus on medical terminology, clinical examination, evaluation, comparing contemporary, traditional interventions and the impact of evolving technology in this area.

### **RECOMMENDED BOOKS**

1. Physiotherapy in Respiratory Care; An evidence based approach to respiratory and cardiac management, By Alexandra Hough (3rd Edition) Nelson Thornes.
2. Essentials of Cardiopulmonary Physical Therapy (2nd Edition) By Hillegass and Sadowsky.
3. Physiotherapy for respiratory and cardiac problems, By: Jennifer A. Pryor & Barbara A. Webber, 2nd edition, Churchill Livingstone.
4. Tidy's Physiotherapy by Thomas A Skinner & Piercy.
5. Therapeutics Exercises and Technique by Carolyn Kisner&Laynn Allen Colby 5th& 6th edition.
6. Cash's Text book of General Medical & Surgical Condition for Physiotherapists by Patrica A. Downie.
7. Cash's Textbook of chest, heart and vascular condition for physiotherapist by Patrica A. Downie.
8. Chest Physio for the War wounded, by Mahboob-ur-Rehman, National Book Foundation.

### **PROSTHETICS & ORTHOTICS**

**CREDIT HOURS: 2(2-0)**

#### **COURSE DESCRIPTION**

This course intends to study prosthetic and orthotic management as applied to a variety of patient populations across a life span. It also addresses the considerations of various pathologies and medical, surgical management to formulate appropriate patient examinations, evaluation, diagnosis, prognosis and intervention that are consistent with physical therapy practice guidelines. Principles of normal biomechanics, pathomechanics, physiology and Pathophysiology will be a major focus for evaluation, intervention and education of the vascular, neuromuscular, and / or musculoskeletal compromised patient to utilize prosthetic or orthotic devices. Basic principles of mechanical physics and material characteristics will be applied.



## **RECOMMENDED BOOKS**

1. Prosthetics and Patient Management: A Comprehensive Clinical Approach By: Kevin Carroll; Joan Edelstein.
2. Orthotics a comprehensive clinical approach By: Joan E Eldestein& Jan Bruckner.

## **CLINICAL DECISION MAKING & DIFFERENTIAL DIAGNOSIS**

**CREDIT HOURS: 3(3-0)**

### **COURSE DESCRIPTION**

The course will cover the principles and methods of clinical screening in physical therapy practice. A basic format for musculoskeletal, neuromuscular, Integumentary, and cardiopulmonary screening in physical therapy will be presented, with a focus on differential diagnosis within the scope of physical therapy practice, and incorporation of the role of the physical therapist as it interfaces with the role of the physician. A clarification of red-flags that differentiate a systemic condition from a neuro-musculoskeletal condition will be a continuing theme throughout the course. Decision-making skills related to physical therapy will be emphasized through the use of patient case scenarios with a focus on when to treat, and when to refer. Strategies to effectively and appropriately communicate with health care colleagues and patients regarding medical diagnostic information and medical status will be introduced.

### **RECOMMENDED BOOKS**

1. Goodman CC, Snyder TEK. Differential Diagnostics for Physical Therapists: Screening for Referral. Saint Louis, MO: Saunders: Elsevier; 2006. ISBN: 978-0-7216-0619-4.
2. APTA. Guide to Physical Therapy Practice: Revised second edition. Alexandria, VA: American Physical Therapy Association; 2003. ISBN: 978-1-887759-85.
3. Additional readings as assigned by the instructors.

## **MANUAL THERAPY**

**CREDIT HOURS: 3(2-1)**

### **COURSE DESCRIPTION**

This course provides review of all Manual Therapy techniques, covering spine, peripheral joint mobilizations, Temporo-Mandibular joint, advanced myofascial trigger point therapy, Proprioceptive training, muscle energy techniques, strain counter strain techniques, neuromobilization combination techniques and mobilization, manipulation techniques.

### **RECOMMENDED BOOKS**

- Manual Mobilization of the Joints TheKaltenborn Method of Joint. Examination and Treatment Volume I, The Extremities By: Freddy M. Kaltenborn in collaboration with Olaf

Evjenth, TraudiBaldauf. Kaltenbom, Dennis Morgan, and Eileen Vollowitz, OPTP Minneapolis, Minnesota, USA.

- Manual Therapy By: Ola Grimsby, the Ola Grimsby institute San Diego.
- Integrative Manual therapy for the upper and lower extremities By: Sharon weiselfish, North Atlantic books Berkeley, California.
- Orthopedic manual therapy an evidence-based approach by: Chad Cook.
- Orthopaedic Manual Therapy Diagnosis Spine and Temporomandibular Joints By: Aad van der.
- Translatorsic Spinal Manipulation By: John R. Krauss, Olaf Evjenth, and Doug Creighton John R. Krauss A Lakeview Media L. L.C. Publication.
- euromusculoskeletal Examination and Assessment A Handbook for Therapists.
- By: Nicola J Petty, Ann P Moore & G D Maitland, Second Edition Churchill Livingstone.
- Myofascial Manipulation Theory and Clinical Application, Second Edition By: Robert I. Cantu, Alan J. Grodin an Aspen Publication Aspen Publishers, Inc. Gaithersburg, Maryland 2001.
- Maitland's Vertebral Manipulation Seventh Edition By: Geoffrey D. Maitland.
- Musculoskeletal manual medicine, diagnosis and treatment by Jiri Dovark, Vaclav Dovark, Werner Schneider etc.
- Manual therapy, NAGS, SNAGS, MWMS etc by Brian R Mulligan fifth edition.

## **PROFESSIONAL PRACTICE IN PHYSICAL THERAPY**

**CREDIT HOURS: 2(2-0)**

### **COURSE DESCRIPTION**

The course will discuss the role, responsibility, ethics administration issues and accountability of the physical therapists. The course will also cover the changes in the profession and its responsibilities to the profession, the public and to the health care team.

### **RECOMMENDED BOOKS**

1. Professionalism in Physical Therapy: History, Practice, & Development, Lisa L. Dutton, PT, PhD.
2. APTA. Guide to Physical Therapy Practice: Revised second edition. Alexandria, VA: American Physical Therapy Association; 2003. ISBN: 978-1-887759-85.
3. Handbook of Teaching for Physical Therapists
4. Katherine Shepard, Gail Jensen, 2011, ISBN: 978-1-4557-3470-2

**INTEGUMENTARY PHYSICAL THERAPY****CREDIT HOURS: 2(2-0)****COURSE DESCRIPTION**

This course includes a study of anatomy and physiology of the Integumentary system and pathological changes of the system and function, including diagnostic tests and measurements. The use of evidence-based physical therapy intervention for Integumentary conditions is emphasized. Topics will focus on comparing contemporary, traditional interventions and the impact of evolving technology in this area. Topics will focus on medical terminology, clinical examination, evaluation, comparing contemporary, traditional interventions and the impact of evolving technology in this area.

**RECOMMENDED BOOKS**

1. Wound Care Essentials, practice principles, By Sharon Baranoski& Elizabeth A. Ayello.
2. APTA. Guide to Physical Therapy Practice: Revised second edition. Alexandria, VA: American Physical Therapy Association; 2003. ISBN: 978-1-887759-85.

**SUPERVISED CLINICAL PRACTICE-V****CREDIT HOURS: 3(0-3)****CARDIOVASCULAR AND PULMONARY****COURSE DESCRIPTION**

During this supervised clinical practice, students are responsible for successful execution of examination, evaluation, and interventions relating to cardiovascular and pulmonary disorders. Students become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of conditions (surgical, non-surgical, pediatric and geriatric,) Students learn to objectively perform these skills under the supervision of trained physical therapists. Student is required to keep a performance record of all listed competencies and successfully perform on real patients during the final evaluation of the course

**OBSTETRICS & GYNEACOLOGICAL PHYSICAL THERAPY****CREDIT HOURS: 2(2-0)****COURSE DESCRIPTION**

This course intends to provide Introduction to physical therapy practice for evaluation and treatment of pelvic floor dysfunction, pregnancy, osteoporosis, and other disorders specific to women. Topics will focus on medical terminology, clinical examination, evaluation, comparing contemporary, traditional interventions and the impact of evolving technology in this area.

**RECOMMENDED BOOKS**

- Geriatric Physical Therapy by Andrew A. Guccione.
- Fundamentals of Geriatric Medicine.

- Gerontology for health care professional by Regula H. Robbnet/ Walter.
- Handbook of gerontology by James A Blackburn and Catherine N Dulmus.

## **SPORTS PHYSICAL THERAPY**

**CREDIT HOURS: 2 (2-0)**

### **COURSE DESCRIPTION**

The main focus of this course is related to the understanding of the role that physical therapists play in both the industrial continuum and sports physical therapy. Emphasis is placed on acute management of traumatic injuries and/or sudden illness. In addition, injury prevention with an emphasis on the advanced clinical competencies related to the practice of sports physical therapy will also be covered.

### **RECOMMENDED BOOKS**

1. Sports Rehabilitation and Injury Prevention by: Paul Comfort & Earle Abrahamson, 1st Edition, 2010, Wiley Blackwell Publishers.
2. Clinical Sports Medicine by: Brukner & Khan, 4ed, McGraw-Hill Publishers.
3. A guide to sports and injury management by: Mike Bundy & Andy Leaver, 1st edition, 2010, Churchill Livingstone

## **SUPERVISED CLINICAL PRACTICE-VI**

**CREDIT HOURS: 4 (0-4)**

### **COURSE DESCRIPTION**

During this supervised clinical practice, students are responsible for successful execution of examination, evaluation, and interventions relating to Integumentary, gynecology and obstetrics, sports and metabolic disorders. Students become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of conditions (surgical, nonsurgical, pediatric, geriatric, obstetrics & gynecology, sports etc.) Students learn to objectively perform these skills under the supervision of trained physical therapists. Student is required to keep a performance record of all listed competencies and successfully perform on real patients during the final evaluation of the course.

### **4.5 Standard 2-1**

**The curriculum must be consistent and supports the program's documented objectives.**

#### **4.5.1 Group 1: Basic Medical and Allied Sciences (B.M.S)**

Anatomy, Physiology, Biochemistry, Kinesiology, Medical Physics, Physical Agents & Electrotherapy, Health & Wellness, Molecular Biology & Genetics, Pathology & Microbiology, Pharmacology & Therapeutics, Biomechanics & Ergonomics, Community Medicine & Rehabilitation, Evidence Based Practice, Scientific Inquiry & Research Methodology, Professional Practice (Laws, Ethics & Administration)

#### **4.5.2 Group 2: Clinical Specialties**

Therapeutic Exercises & Techniques, Musculoskeletal Physical Therapy, Cardiopulmonary Physical Therapy, Neuromuscular Physical Therapy, Manual Therapy, Differential Diagnosis, Integumentary Physical Therapy, Obs & Gynae, Pediatrics Physical Therapy, Medicine, Surgery, Radiology & Diagnostic Imaging, Emergency Procedures & Primary Care In Physical Therapy, Prosthetics & Orthotics, Gerontology & Geriatric Physical Therapy, Sports Physical Therapy, Research Project, Supervised Clinical Practice 6,7,8,9, 10.

#### **4.5.3 Group 3 Humanities**

Islamic Studies, Pak Studies, Sociology, Biostatistics, Behavioral Sciences (Psychology & Ethics)

### **4.6 Standard 2-2**

**Theoretical backgrounds, problem analysis and solution design stressed within the program's core material.**

<b>Elements</b>	<b>Courses</b>
<b>Theoretical Background</b>	Anatomy, Physiology, Biochemistry, Kinesiology, Medical Physics, Islamic Studies, Pak studies, Sociology, Health & Wellness, Molecular Biology & Genetics, Pathology & Microbiology, Pharmacology & Therapeutics, Biomechanics & Ergonomics, English, Community Medicine
<b>Problem Analysis</b>	Musculoskeletal Physical Therapy, Cardiopulmonary Physical Therapy, Neuromuscular Physical Therapy, Differential Diagnosis, Integumentary Physical therapy, Obs & Gynae, Pediatrics Physical Therapy, Medicine, Surgery, Pathology, Gerontology & Geriatric Physical Therapy, Radiology & Diagnostic Imaging, Supervised Clinical Practice 6,7,8,9,10
<b>Solution Design</b>	Manual Therapy, Electrotherapy, Therapeutic Exercise and Techniques, Health Education and Teaching Methodology, Community based rehabilitation, Emergency Procedures & Primary Care in Physical Therapy, Prosthetics & Orthotics, Sports Physical Therapy.

**Table 5: Standard 2-2 Requirement**

#### **4.7 Standard 2-3**

**The Curriculum must satisfy the core requirements for the program as specified by the respective accreditation body.**

DPT program is accredited by Higher Education Commission (HEC). Minimum Requirements for each program (Program Year Weeks)

<b>Program</b>	<b>General Education (Humanities &amp; Basic Sciences)</b>	<b>Basic Medical and Allied Science Topics</b>	<b>Clinical Specialties</b>
DPT	16	16	16

**Table 6: Program Weeks**

#### **4.8 Standard 2-4**

**The curriculum must satisfy the major requirements for the program as specified by the respective accreditation body.**

Same as Standard 2-3.

#### **4.9 Standard 2-5**

**The curriculum must satisfy general education, arts and professional and other discipline requirements for the program as specified by the respective accreditation body.**

Same as standard 2-3 and Standard 2-1 (table 4.4) as defined above.

#### **4.10 Standard 2-6**

**Information technology component of the curriculum must be integrated throughout the program**

The program does not contain information technology as a subject. However, the management strongly encourages the use of IT tools by the students for submission of assignments etc.

#### 4.11 Standard 2-7

**Oral and written communication skills of the student must be developed and applied in the program.**

Students are given oral communication practices through topics presentation in the central classes during the course of theoretical and clinical studies. While undergoing clinical training in the wards, the students present their assigned cases to the senior students and faculty thereby improving their oral and written communication skills.

#### 5.0 Criterion 3: Laboratories and Computing Facilities

Riphah has established multiple laboratories for students to practice their learning outcomes. Following is the list of available laboratories:

##### DETAIL OF LABORATORY EQUIPMENT (Anatomy)

S.No	Equipment	Specification	Quantity
1.	Model Full Torso	Human China	2
2.	Model Abdominal Wall	China	2
3.	Skull Plastic		3
4.	Human Skeleton	miniature colored	3
5.	Model Vertebral Column	china	1
6.	Model Vertebral Sets		3
7.	Human Skeleton	170cm	2
8.	Stomach Models		2
9.	Model Liver		2
10.	Model Liver, Pancrease & Duodenum		1
11.	Model Deodenum & Pancrease		1
12.	Model Digestive System		3
13.	Model Sagittal Section of Kidney		2
14.	Model Kidney With Ureter	Abdominal Aorta & Inferior Venacava	2

15.	Human Head & Neck Model		3
16.	Model Deep nerves, vas and muscles in cervix		3
17.	Eye Model		2
18.	Human Brain Model	Showing different parts	3
19.	Ear Model		2
20.	Model Mandible		2
21.	Model Larynx		2
22.	Model Liver Showing Internal Structure		2
23.	Model Lateral Wall of Nose & Maxilla		2
24.	Model Circulatory System		2
25.	Model Boney Pelvis		3
26.	Model Sagital Section Male & Female		2
27.	Knee Joint Model		4
28.	Model Foot		4
29.	Hip Joint Model		4
30.	Human Lower Limb Model		4
31.	Human Upper Limb Model		4
32.	Shoulder Joint Model		4
33.	Elbow Joint Model		4
34.	Model Hand	Joint	4
35.	Model Skin	Section	3
36.	Model Contents of Thoracic		2
37.	Model Lungs		2
38.	Model Pulmonary Alveoli		1
39.	Bones of Upper and Lower Limbs	Dis articulated Skeleton	8



40.	Model Development of Face Stages		1
41.	Model Human Embryo		1
42.	Model Fetus circulation and placenta		1
43.	Model Male Genetilia		1
44.	Model Human Body Boards		2
45.	Model Spinal Cord		3
46.	Model Autonomic Nervous System		3
47.	Model Neuron synapse and nerve fiber structure		2
48.	Heart Model		3
49.	Model Human Figure	Muscular Body 85cm	3
50.	Model Stages of Embryonic Development		1
51.	Model Lymph Node	Section	3
52.	Model Apendix		1
53.	Model Brain Stem		2
54.	Human Skeleton	Miniature colored	2
55.	Model Vertebral column	China	1
56.	Model Vertebral Sets		2
57.	Knee Joint Model		2
58.	Model Foot		2
59.	Hip Joint Model		2
60.	Shoulder Joint Model		2
61.	Elbow Joint Model		2
62.	Model Hand	Joint	2
63.	Bones of Upper & Lower	Dis articulated Skeleton	4

64.	Model Oral,nasal cavity and oral cavity arises		2
-----	--	--	---

**DETAIL OF LABORATORY EQUIPMENT (Physiology)**

<b>S.No</b>	<b>Equipment</b>	<b>Specification</b>	<b>Quantity</b>
1.	Scissors	SS Made Midium Size	2
2.	Magnifying Glass	75mm	11
3.	Petri Dish Glass		50
4.	Glass Spreader		10
5.	Thermometer	0 to 250 degrees Lab	10
6.	Torniquet Set		2
7.	Domestic Gloves	Heat Resistant	2
8.	Forceps		10
9.	Pithing Needle		10
10.	Plastic Jar	100ml	10
11.	Scalpel		10
12.	Scissors	Surgical 9"	10
13.	Wire Loop	Nickle Chromium	20
14.	Reagent Bottle	Plastic	1
15.	Pad for Tuning Fork		10
16.	Snellens Chart		3
17.	Dissection Board	Wooden	10
18.	Test Tube Plastic for Centrifuge	15ml	6
19.	Clinical Spirometer	Microquark (PC based)	1
20.	Pulse Oximeter Fin r T		2
21.	G5 Vibracare Percussor		1
22.	BP Apparatus Stand Type		2

23.	Stationary Bicycle with Large Seat		1
24.	Dumbbell Set		30
25.	Measuring Tape		20
26.	Hammer		10
27.	Stethoscope		10
28.	Ischiara Chart		2
29.	Jug	Plastic	1

**DETAIL OF LABORATORY EQUIPMENT (Multi Lab-Pathology and Biochemistry)**

<b>S.No</b>	<b>Equipment</b>	<b>Specification</b>	<b>Quantity</b>
1.	Heating Mantle	250ml	2
2.	Sonicator		1
3.	Electronic Balance	10 mg sensitivity	2
4.	Microscope Binocular	NOIF 107	20
5.	Stage Micrometer	and Occular	10
6.	Sterilization Box	for Petri Plates	2
7.	Jars Anaerobic	2.5 L	1
8.	Colony Counter		1
9.	UV Lamp Portable		1
10.	Glucometer		6
11.	Chemistry Analyzer	AMP Austria	1
12.	PH Meter	Bench Type	3
13.	Distillation Plant Stainless Steel		1
14.	Water bath China	4 Hole digital	2
15.	Shaking Water Bath		1
16.	Stop Watch	Q & Q	20

17.	Hot Air Oven	32 Litr China	1
18.	Incubator	with thermostat 32 Litr	1
19.	Hot Plate With Magnetic Stirrer		4
20.	Centrifuge Machine	Model 800 Ch	4
21.	Micro Pipette	10-100	5
22.	Micro Pipette	100-1000	5
23.	Micro Pipette	1000	5
24.	Autoclave	16 Ltr SS China	1
25.	Bunsen Burner		4
26.	B.P Set Desk Model		10
27.	Bone Cutter		10
28.	Esr Stand		10
29.	ECG Machine		2
30.	Exercise Bike		2
31.	Haemocytometer		10
32.	Weight Machine		2
33.	Kymograph	with Accessories	5
34.	Oxygen Gas Cylinder	with trolley & Key	5
35.	Blood Grouping Sheet		10
36.	Instrument Tray Large	SS 18X12	6
37.	Tuning Fork		10
38.	Spirometer		5
39.	Haematocrit Reader	China	2
40.	Peak Flow Meter		5
41.	X-Ray View Box		2

42.	Theraband	Set of 4	1
43.	Hb Meter		15
44.	Pestle & Mortle		4
45.	Spectrophotometer	Model 721 China	2
46.	Weighing Balance 0.01gm	10mg to 320gm	6
47.	Instrument Tray Small	SS	5
48.	Syringe Discarder		1
49.	B.P Apparatus	Digital / China	5
50.	Centrifuge Machine	800 C	1
51.	Students Perimeter		2
52.	Light Stand for Snellens Chart		3
53.	Top Loading Balance	China	1
54.	Timer for Lab	China	2
55.	Container Steel	for Swabs	2
56.	Oxygen Flow Meter Kit		5
57.	Heart Clip		5
58.	Micro Haematocrit Machine	Taiwan	1
59.	Micro Pippet Stand Plastic		5
60.	Electrolyte Analyzer	for Na & K China	1
61.	Laminar Flow Hood	2 X 2 X 2 China Made	1
62.	Electronic Cell Counter	Taiwan	1

63.	Ethanol	Ethanol 95%	Liter	0.5
64.	Ethanol	Ethanol 100%	Liter	0.5
65.	Spirit Methylated		Liter	0.5

66.	Hydrochloric Acid		Bottle	1
67.	EDTA Powder	500G	Grams	500
68.	Crystal Violet		Milli liter	500
69.	Iodine		Grams	500
70.	Safranine		Milligrams	500
71.	Carbol Fuschin	500ml bottle	Grams	500
72.	Methylene blue		Milli liter	500
73.	Kit Widal Test	Serum	Kit	1
74.	Kit RA Factor 100 Test		Kit	1
75.	Kit Glucose 500 ml		Kit	1
76.	Kit Cholestrol 100 ml		Kit	1
77.	Kit CRP 50 Test		Kit	1
78.	Kit Creatinine 100 ml		Kit	1
79.	Kit Urea UV 20 ml		Kit	1
80.	Kit Uric Acid 100 ml		Kit	1
81.	Kit Total Lipids		Kit	1
82.	Kit Total Protein 500 ml		Kit	1
83.	Kit HDL 80 ml		Kit	1
84.	Kit LDL 100 ml		Kit	1
85.	Uri Stick Multiple	100 Strips Bottle	Pkt	1
86.	Tips Blue		Pkt	1
87.	Tips Yellow		Pkt	1
88.	Brush Nylone		No	6
89.	Cotton Roll 200gm		No	2
90.	Methyl Alcohol Merck		Liter	1

91.	Kit Thromboplastine/ PT 10 ml		Kit	1
92.	Kit Triglyceride 400 ml		Kit	1
93.	Kit Total Bilirubin 625 ml		Kit	1
94.	Kit ASOT 100 Test		Kit	1
95.	Kit ALAT 10 ml		Kit	1
96.	Kit CK MB 5 ml		Kit	1
97.	Masks as Service	Pack of 50	No	1
98.	Eppendorfs Tube		No	100
99.	Lancets		No	100
100.	Beaker Glass 1000 ml		No	6
101.	Beaker Glass 500 ml		No	12
102.	Beaker Glass 250 ml		No	12
103.	Beaker Glass 200ml		No	6
104.	Reagent Bottle	1000ml	No	10
105.	Reagent Bottle	500ml	No	20
106.	Reagent Bottle	250ml	No	20
107.	Reagent Bottle	125ml	No	20
108.	Reagent Bottle	60ml	No	4
109.	Burette 50 ml		No	6
110.	Conical Flask 1000 ml		No	6
111.	Conical Flask 500 ml		No	15
112.	Conical flask 100 ml		No	15
113.	Conical Flask 50ml		No	6
114.	Volumetric Flask 1000ml		No	6
115.	Volumetric Flask 500ml		No	15

116.	Volumetric Flask 250ml		No	15
117.	Volumetric Flask 100ml		No	4
118.	Measuring Cylinder 1000ml		No	4
119.	Measuring Cylinder 250ml		No	10
120.	Measuring Cylinder 100ml		No	10
121.	Measuring Cylinder 25ml		No	72
122.	Disposable Syringes 5cc		No	100
123.	Filter Paper Small		Pkt	10
124.	Glass funnels		No	60
125.	Glass rods		No	10
126.	Pipette 10ml		No	20
127.	Pipette 5ml		No	20
128.	Pipette 2ml		No	20
129.	Pipette 1ml		No	20
130.	Pippet 0.5ml		No	20
131.	Test Tube 3"		No	100
132.	Test Tube 4"		No	100
133.	Test Tube Brush		No	24
134.	Test Tube Holder		No	10
135.	Pestle & Mortle		No	20
136.	Spatulas		No	20
137.	Spirit Lamp		No	10
138.	Wash bottles		No	20
139.	Pippet Sucker		No	20
140.	Test Tube Stand Steel		No	40



141.	Glass Slides		Pkt	20
142.	Cover Slip 22x22	18X18	Pkt	15
143.	Tripod Stand		No	15
144.	Wire Gauze		No	15
145.	Clamp	Boss Clamp	No	20
146.	Forceps		No	10
147.	Ammonium Sulphate		Kilogram	0.2
148.	Ammonium Molybdate		Grams	200
149.	Amm Chloride Powder		Kilogram	0.2
150.	Acetic Acid		Liter	1
151.	Acid Boric		Grams	200
152.	Calcium Chloride		Kilogram	0.2
153.	Copper Sulphate		Kilogram	0.2
154.	Acid Citric Powder		Kilogram	0.2
155.	Fructose		Kilogram	0.2
156.	Formaline Solution		Liter	2
157.	Burette Stand		No	20
158.	Glucose		Kilogram	0.2
159.	Galactose		Grams	200
160.	Hydrogen Peroxide		Liter	1
161.	Iodine		Grams	200
162.	Lactose Powder		Kilogram	0.2
163.	Lead Acetate		Kilogram	0.2
164.	Methylene blue		Milli liter	200
165.	Methyl Orange		Milli liter	200

166.	Magnesium Chloride		Grams	200
167.	Mercuric Sulphate		Grams	200
168.	Nitric Acid Merck (2.5 Ltr)		Liter	0.5
169.	Naphthol	Alpha Naphthol	Grams	200
170.	Potassium Iodide		Kilogram	0.2
171.	Potassium Hydro Oxide		Kilogram	0.2
172.	Potassium Permanganate		Kilogram	0.2
173.	Potassium Chloride		Kilogram	0.2
174.	Phenol		Liter	0.2
175.	Phenyl Hydrazine		Bottle	1
176.	Potassium Oxalate		Kilogram	0.2
177.	Sodium Carbonate		Kilogram	0.2
178.	Sucrose Powder		Grams	200
179.	Sodium Acetate		Grams	200
180.	Sodium Citrate		Grams	200
181.	Silver Nitrate 25 Grm		No	1
182.	Urea		Grams	200
183.	Conical Flask 250ml		No	15
184.	Potassium Bromide		Grams	1
185.	Glycogen		Grams	1
186.	Mannose		Grams	1
187.	Funnel Stand		No	20
188.	Measuring Cylinder 500ml		No	4

**DETAIL OF LABORATORY EQUIPMENT (Kinesiology and Biomechanics)**

S.No	Equipment	Specification	Quantity
------	-----------	---------------	----------

1.	Crutches Elbow		5
2.	Auxillary Crutches	Medium & Large Size	8
3.	Cane Stick		5
4.	Walking Frame	with front wheels	2
5.	Walking Frame		1
6.	Stick Tetrapod		4
7.	Balance Board	Wodden Local	1
8.	Shoulder Pulleys	with weights complete set	2
9.	Shoulder Wheel	Wooden	1
10.	Finger Ladder		3
11.	Wheel Chair	With removable arms	2
12.	Pillows & Bolsters		10
13.	Examination Couch		7
14.	Training Stairs	case	4
15.	Mirror	One with stand and one to be fixed on wall	2
16.	Parallel Bars Platform Mounted		1
17.	Suspension Unit		2
18.	Tilt Table Mannual		1
19.	Standing Walking Frame	One for adults and one for children	2
20.	Exercise Mat		4
21.	Goniometer	Set	10
22.	Patient Screen		4
23.	3-Section Therapy Couch - Hydraulic plinth	Manumed Type 212	2
24.	Wedge Triangle soft	16x4x0	6

25.	Wedge Triangle Hard	16x4x00	1
26.	Wedge Rectangle le Soft	24x12x6	1
27.	Wedge Rectangle Hard	24x12x6	1
28.	Mobilization Strap	USA	4
29.	The Original McKenzie Super Roll	50x8.5	3
30.	Sara Meeks Half Roller Hard	50x8..5	3
31.	Sara Meeks Half Roller soft	USA	3
32.	Mulligan Mobilization Pads	212	4
33.	TheraBand	Y/R/G set of 1.5 Meter	3
34.	Goniometer set Of 5	Local by Jami	4
35.	Measurement posture grid	Baseline USA	1
36.	Stabilizer Pressure Biofeedback	Neen Peritone, Single Channel	1
37.	Universal Inclinator	USA	4
38.	Algometer		1
39.	PALM (palpation meter )		1
40.	Measurement Scoliometer	Baseline US	1

**DETAIL OF LABORATORY EQUIPMENT (Medical Physics and Electrotherapy)**

S.No	Equipment	Quantity
1.	Voltmeter whose resistance is to be measured	6
2.	A battery or power supply matching maximum voltmeter reading	6
3.	Resistance box upto 10,000 ohms	6
4.	Keys	6
5.	Connecting Wires	6
6.	Galvanometer	6
7.	Battery 0-12VDC	6

8.	Low resistance box	6
9.	One-way keys	6
10.	Connecting wires	6
11.	Sand paper	6
12.	Wire potentiometer 0-100cm	6
13.	Vernier calipers	10
14.	Solid cylinder	10
15.	Screw gauge	10
16.	A given wire	10
17.	Drying Boards	20
18.	Glass prisms	20
19.	Rectangular slabs	20
20.	White sheets of paper	
21.	Common pins	
22.	Thumb pins	
23.	Metallic bob of different masses with hooks	6
24.	Fine thread	6
25.	Stop watch	6
26.	Split cork	6
27.	Iron stand with clamps	6
28.	Meter rod and piece of chalk	6
29.	Spring balance	6
30.	Helical Spring	10
31.	Slotted weight box	10
32.	Lagged Beaker or Calorimeter with a Lid	6

33.	Heating coil	6
34.	Battery or low voltage power supply	6
35.	Rheostat	6
36.	Ammeter or multimeter	6
37.	thermometer	6
38.	Balance	6
39.	Digital Thermometer	6
40.	Thermocouple	6
41.	Temperature Controllable bath	6
42.	Multimeter	6
43.	Unknown resistance coil or resistance wire	6
44.	A voltmeter and a ammeter of appropriate (1.5V) range	6
45.	A Battery	6
46.	A Rheostat	6
47.	Connecting wires	6
48.	A piece of sand paper	6
49.	One-way Key	6

S.No	Equipment	Specification	Quantity
1.	Ultrasound unit Therapatic Combo Sonopuls 464 (Enraf)	Schnoplus 492. Enraf	1
2.	Cold packs		2
3.	Hot Packs	Knee 10"x20"	2
4.	Hot Packs	Cervical contour	2
5.	EMS UNIT with Small and Lar ELECTRODES with Pencil Probe	EN-Stim4	1

6.	Ultraviolet Thera units with stand	Germany	1
7.	IRR with 3 bulbs on heavy\ stand with timer & Intensity control	Local Made New	1
8.	Microwave therapy made in Japan		1
9.	Crutches Elbow		3
10.	Axilla Crutches	Medium & Large size	3
11.	Cane Stick		3
12.	Walking Frame	with front wheels	2
13.	Walking Frame		1
14.	Stick Tetra		2
15.	Balance Board	wooden local	1
16.	Shoulder Pulleys	Set	1
17.	Shoulder Wheel	Wooden	1
18.	Finger Ladder		2
19.	Wheel Chair	with removable arms	1
20.	Examination Couch		0
21.	Training Stairs	Case	1
22.	Mirror	be fixed on wall	1
23.	Parallel Bars Platform Mounted		1
24.	Standing Walking Frame	Paeds	2
25.	Exercise Mat		1
26.	Goniometer	Set	5
27.	Tens	Besmed 660 Taiwan	6
28.	Ultrasound unit Therapatic Combo Sonoplus 464 (Enraf)	Sonoplus 492, Enraf	1
29.	Cold Pack with COOLING UNIT	SSC. Chatanoga USA, 1 Y	1

30.	Cold packs Free of cost)	FOC with Unit	8
31.	EMS UNIT with small and Large ELECTRODES with pencil Probe	EN-Stim4	1
32.	Stationary Bicycle with Large Seat		1
33.	Hand Gripper Set	Set Of 4	1
34.	TILT Table	Local Made New	1
35.	Mulligan Mobilization Belt"	Local	6
36.	Bo Bath Bed Hydraulic	Refurbished USA, 1 year	1
37.	Hot Packs half size	25cmx30cm	4
38.	Hot Packs	Knee 10"x20"	4
39.	Hot Packs	Cervical contour	4
40.	Ultraviolet Thera units with stand	Germany	1
41.	IRR with 3 bulbs on heavy stand with timer intensity control	Local Made New	1
42.	Microwave therapy made in Japan		1
43.	Gym Ball (2- 10 Kg)		1
44.	Exercise Ball	120 cm	1
45.	Exercise Ball	85 cm	1
46.	Exercise Ball	65 cm	1
47.	Exercise Ball	45 cm	1
48.	Endomed 582 ID with Local Leads	Enrof, 1 Year, RF	1
49.	Digital Computerized 4 Channel NCS EMG	MDX.USA	1

**DETAIL OF LABORATORY EQUIPMENT (Clinical Practice)**

S.No	Equipment	Quantity
1.	Mulligan mobilizing Belts with soft pad prime quality	10
2.	Goniometers set of 5 prime quality	10



3.	Rehab Balls set of 5 UK imported	1
4.	CANDO FLEXIBLE HAND BAR set of 6	1
5.	HAND EXERCISE WEB CANDO LOW POWDER 35.5CM set of 6	1
6.	High Low treatment couch hydraulic/electric	10
7.	Foam Roller 50cmX17cm Soft	2
8.	Foam Roller 50cmX17cm Hard	2
9.	Foam Roller half round 50cmX8.5cm soft	10
10.	Foam Roller half round 50cmX8.5cm Hard	5
11.	Foam Roller 5"X20" supreme quality with closed cell foam	2
12.	Wedge Rectangle 24x12x6 inches Soft	2
13.	Wedge Rectangle 24x12x6 inches Hard	2
14.	Wedge Triangle 16x4x0 inches Soft	2
15.	Wedge Triangle 16x4x0 inches Hard	2
16.	STRENGTH DYNAMOMETER JAMAR HAND	1
17.	STRENGTH DYNAMOMETER JAMAR HAND Used	1
18.	STRENGTH JAMAR PLUS DIGITAL HAND DYNAMOMETER	1
19.	TheraBand CLX with set of bands of different resistance levels, USA	1
20.	Mobile weight rack for cuff weights dumbbells and resistance bands USA	1
21.	commander power track manual muscle test	1
22.	Grip Dynamometer	1
23.	Height weight machine	1
24.	Treadmill with LED screen	1
25.	Multi Gym 4 weight station	1
26.	Elliptical cross Trainer with LED screen	1
27.	Exercise Mats	5

28.	Recumbent Bike with LED screen with WIFI	1
29.	Gym Ball	3
30.	TheraBand wall station	1
31.	Free weight and TheraBand rack free weight and cuff weight	1

**DETAIL OF LABORATORY EQUIPMENT (Research Lab)**

<b>S.No</b>	<b>Equipment</b>	<b>Quantity</b>
1	Force plates (PS-2141)	1
2	Sony Handy Cam ( CX-405)	1
3	EMG Biofeedback	1
4	X BOX 360, Kinect 360, Hand controller	1
5	Algometer (FP x 25)	1
6	Pelvic Inclinator	1
7	Inclinometer	1
8	Elliptical Cycle	1
9	Stationary Cycle	1
10	Blood Pressure Machine	1
11	Pulse Oximeter	1
12	Power Breath	1
13	Expiratory Muscle Training (EMT-150)	1
14	Trampolin, Horse wood, Blocks, Round exercise	1
15	Mat, Twister, Toy box, Cube and Piano, Slate, Clay, Balls, Pogo Stick	1
16	Digital Spirometer (Spriotron)	1
17	Mouth Pieces	1
18	Lange skin fold caliper	1
19	JAMAR Hydraulic Hand Dynamometer	1

20	Accuflex sit and reach unit	1
21	Zephyr Bioharnesses with Bioharness software	1
22	Bicycle ergometers	1
23	Biodex Treadmill	1

### 5.1 Standard 3-1

**Laboratory manuals/documentation/instructions for experiments must be available and easily accessible to faculty and students.**

Laboratory In-charge is the custodian of all the manuals and instructions concerning his laboratory. Its copies are also available with the Program Coordinator to be used by the faculty and students. These manuals and instructions are issued to desired entity through a defined process and proper record is maintained. The laboratory in-charge keeps the manuals and instructions in laboratory for immediate access to students and faculty members during the laboratory work.

### 5.2 Standard 3-2

**There must be support personnel for instruction and maintaining the laboratories.**

Each laboratory is authorized two staff members, Laboratory In-Charge and Laboratory Attendant. Laboratory in-charge is responsible for overall maintenance of laboratory and also maintains the manuals and instructions while laboratory Attendant is responsible to maintain the laboratory equipment and general duties within the lab.

### 5.3 Standard 3-3

**The University computing infrastructure and facilities must be adequate to support program's objectives.**

The computer facilities available to the students and faculty are in abundance. Every teacher has a dedicated computer and access to internet during and after working hours. Similarly students have 20 terminals to their disposal in the library where they have access to unlimited internet and computing facilities. 50 terminals are available to students in IT lab specially made for DPT students

RCR&AHS is running a comprehensive Campus Management System. It facilitates the faculty members in maintaining the attendance record, examination schedules, time tables and student's data.

## **6.0 Criterion 4: Student Support and Advising**

All, RCR&AHS programs, started and finished on schedule. The teachers and students in RCR&AHS have facility of interaction, even after classes, for any professional and academic advice. This fact is also highlighted by the students in the feedback on Performa number 10, taken by the Quality Enhancement Cell (QEC).

### **6.1 Standard 4-1**

**Courses must be offered with sufficient frequency and number for students to complete the program in a timely manner.**

The department offers courses (core and humanities) as per requirements of the program. The required and elective courses are offered in a logical sequence to groom the students to obtain the program's defined objectives and outcomes. The courses offered outside the department belong to Faculty of medical Sciences and Faculty of Social Sciences. The DPT program In charge with the respective resource person in both the faculties and accommodates the desired courses in program's time table. This is done well in advance, prior to the commencement of classes to avoid any clashes in the schedule.

### **6.2 Standard 4-2**

**Courses in the major area of study must be structured to ensure effective interaction between students, faculty and teaching assistants.**

All courses in the program are taught by the single faculty member. Courses are structured in the board of studies, before, commencement of each academic year. Faculty members carry out frequent interaction with students. Students are encouraged to give feedback and their views, about syllabi during and after the classes.

### **6.3 Standard 4-3**

**Guidance on how to complete the program must be available to all students and access to qualified advising must be available to make course decisions and career choices.**

Students are briefed about the program contents at the start of the session during orientation week by in-charge program and QEC staff. In-Charge Program acts as advisor to guide students to choose appropriate courses and also provide guidance on different issues. He maintains a list of guidance points provided to students during the whole duration of the program. Guidance points are evaluated at the end of the program to have necessary improvements.

In-charge student's affair endeavors to give professional counseling to students when needed. Students can get in touch directly with him/her for any advice/guidance.

Program In Charge advises students regarding selection of professional societies and technical bodies. He helps students to get membership of such organizations on individual basis as per their choice.

In-charge program coordinates with different hospitals to have study/clinical tours for students to improve their subject vision and clinical skills. He is also mandated to invite professionals from different hospitals for having interactive sessions with students.

## **7.0 Criterion 5: Process Control**

### **7.1 Standard 5-1**

**The process by which students are admitted to the program must be based on quantitative and qualitative criteria and clearly documented. This process must be periodically evaluated to ensure that it is meeting its objectives.**

Admissions are made twice a year, Fall and Spring. The program has a well-defined admission criterion that includes evaluation of student's marks at different levels and admission test results.

Students with more than 50% marks in HSSC (Pre Medical) or equivalent are eligible to appear in the admission test of the program. Admission is granted strictly on the basis of academic record and admission test.

Inter medical college/university transfer are also allowed. Students from accredited medical colleges/universities are eligible to transfer their credits to Riphah. Students have to submit complete course curriculum and internal evaluation certificate of each subject from his/her previous institution duly signed by head of department/principal. Student's

requests in this regard are dealt on case to case basis. Such requests are discussed in Board of Studies for decision. Dean of the faculty is final deciding authority.

The admission criterion is evaluated every 2 years by the board of faculties and academic council in the light of instructions issued by HEC. Minor adjustments regarding admission test results weightages or test contents are made within university.

## **7.2 Standard 5-2**

**The process by which students are registered in the program and monitoring of students' progress to ensure timely completion of the program must be documented. This process must be periodically evaluated to ensure that it is meeting its objectives.**

The selected students are registered by Registrar office and registration numbers are issued. At the end of each semester students are evaluated through assignments, sessionals, mid-term tests and final examinations. The Clinical work has got a good weight-age and it is done on regular basis as per schedule and contributes significantly towards the student's evaluation for relevant course. Passing students in each semester are allowed to join the next semester.

## **7.3 Standard 5-3**

**The process of recruiting and retaining highly qualified faculty members must be in place and clearly documented. Also processes and procedures for faculty evaluation, promotion must be consistent with institution mission statement. These processes must be periodically evaluated to ensure that it is meeting with its objectives.**

Vacant positions are advertised in the national newspapers. Applications are scrutinized by the DEAN FR&AHS and HR Department. Call letters are issued to the short-listed candidates on the basis of experience, qualification, publications and other factors as determined by the University in the light of HEC guidelines.

University has a very transparent selection system. Selection of candidates is approved by the Board of Governors (BOG). Good pay package, favorable teaching environments, research facilities and management support keeps the teachers glued to Riphah.

Faculty performance is evaluated through performa number 10 by students. QEC evaluates data, makes comparative charts and puts up to the Director. Annual increment is awarded to the faculty members on the recommendations of DEAN FR&AHS, Vice Chancellor and approval of Chancellor.

#### **7.4 Standard 5-4**

**The process and procedures used to ensure that teaching and delivery of course material to the students emphasizes active learning and that course learning outcomes are met. The process must be periodically evaluated to ensure that it is meeting its objectives.**

Students are the recipient of the delivery of course material, through their teachers. The program is actively evaluated by Dean, In Charge program and QEC. The feedback of the students is best instrument to measure that the course learning outcomes are met. The students give feedback on Performa number 1 regarding course contents and how it was delivered. Through Performa number 10, students evaluate and comment on teacher's efforts, put in to deliver the course contents, his/her general conduct in the class, the environment, he/she, maintains and extra efforts, he/she makes to satisfy student's thirst for knowledge.

Faculty feedback is also taken on HEC Performa number 2 (Faculty Course Review Report) and Performa number 5 (Faculty Survey) which is a very useful activity to evaluate the course contents, learning and teaching environments and overall teachers satisfaction level. Course evaluation by teachers also indicates what percentage of desired outcome has been achieved by the course contents and what needs to be improved or changed.

This exercise is done at the end of each semester. The feedback is discussed with Dean and In-charge program, who focuses on making improvements in the weak areas, identified by the students. Each teacher is graded out of 5 marks. The comparative bar charts indicate level of performance of teachers, as visualized by the students. QEC formally submits these bar charts to Dean and Vice Chancellor for their information and taking necessary corrective actions.

#### **7.5 Standard 5-5**

**The process that ensures that graduates have completed the requirements of the program must be based on standards, effective and clearly documented**

**procedures. This process must be periodically evaluated to ensure that it is meeting its objectives.**

The program is run on semester basis and at the end of each semester examinations are held to evaluate the student's progress. Qualified students are allowed to join next semester and this cycle continues till the end of tenth semester which is the final semester. The program completion process is evaluated on the basis of feedbacks from current students. The feedback is documented and its evaluation indicates degree of satisfaction of the students.

## **8.0 Criterion 6: Faculty**

### **8.1 Standard 6-1**

**There must be enough full time faculties who are committed to the program to provide adequate coverage of the program areas/courses with continuity and stability. The interests and qualifications of all faculty members must be sufficient to teach all courses, plan, modify and update courses and curricula. All faculty members must have a level of competence that would normally be obtained through graduate work in the discipline. The majority of the faculty must hold a Ph.D. in the discipline.**

<b>Program Area of Specialization</b>	<b>Courses in the area and average number of sections per year</b>	<b>Number of Faculty Members in each area</b>	<b>Number of Faculty Members with Ph.D. Degree</b>
<b>Basic Medical and Allied Sciences</b>	Anatomy, Physiology, Biochemistry, Kinesiology, Medical Physics, Physical Agents & Electrotherapy, Health & Wellness, Molecular Biology & Genetics, Pathology & Microbiology, Pharmacology & Therapeutics, Biomechanics & Ergonomics, Community Medicine & Rehabilitation, Evidence Based Practice, Scientific Inquiry & Research Methodology, Professional Practice (Laws, Ethics & Administration)	41	



<b>Clinical Specialties</b>	Therapeutic Exercises & Techniques, Musculoskeletal Physical Therapy, Cardiopulmonary Physical Therapy, Neuromuscular Physical Therapy, Manual Therapy, Differential Diagnosis, Integumentary Physical Therapy, Obs & Gynae, Pediatrics Physical Therapy, Medicine, Surgery, Radiology & Diagnostic Imaging, Emergency Procedures & Primary Care In Physical Therapy, Prosthetics & Orthotics, Gerontology & Geriatric Physical Therapy, Sports Physical Therapy, Research Project, Supervised Clinical Practice 6,7,8,9, 10.		
-----------------------------	---	--	--

**Table 11: Faculty Distribution by Program Area (table 4.6)**

## 8.2 Standard 6-2

**All faculty members must remain current in the discipline and sufficient time must be provided for scholarly activities and professional development. Also, effective programs for faculty development must be in place. Effective Programs for Faculty Development**

Faculty concurrency in the discipline is based on the criterion set by the University, in the light of HEC guidelines. This information is compared with the existing criterion set by university for the concurrency of the post.

All full time faculty members are allocated teaching hours as per HEC defined limit which enables the faculty to have enough spare time to perform scholarly activities and improve their knowledge and skills.

Faculty members are provided adequate resources for research and academic activities. Faculty members have also access to library materials for academic and research activities. Professional training is provided to faculty if required to enhance their capabilities, through Riphah Academy of Research and Education (RARE).

RARE holds frequent interactive sessions of junior and senior faculty to discuss teaching methodology with a view to train the young faculty members. This practice is done on

yearly basis during the summer vacations. After every 2 years the development program is analyzed in Deans Council for its effectiveness and necessary improvements.

The university encourages the faculty to participate in research activities by providing them sufficient financial support within or outside university.

### **8.3 Standard 6-3**

**All faculty members should be motivated and have job satisfaction to excel in their profession.**

Faculty members are motivated through public appreciation and documented appreciation (annual performance evaluation report) by the Director on regular basis.

The faculty survey of the program using HEC Performa number 5 indicates the reactions of the faculty, which indicates that teaching load is evenly distributed and faculty is having relaxed environment. Results of faculty surveys are attached in Annexure G. The compiled report of all the faculty members of the university including is put up to Pro-Chancellor, Vice Chancellor and the respective Deans/Director for their information/evaluation for improvements in the areas, identified by the faculty members.

## **9.0 Criterion 7: Institutional Facilities**

### **9.1 Standard 7-1**

**The institution must have the infrastructure to support new trends in learning such as e-learning.**

The university has provided e-learning facilities to faculty members and students. Each faculty member has a computer system with access to internet and e-learning library section.

Students have been provided a number of computer systems in the library to access e-learning section. Every student has been provided with user ID to access the e-learning resources from within the university library. The university library is linked with foreign universities libraries through internet.

The support staff to look after the e-learning resources is sufficient in number, trained and responsive. The university has provided enough funding to support the e-learning.

## **9.2 Standard 7-2**

**The library must possess an up-to-date technical collection relevant to the program and must be adequately staffed with professional personnel.**

The university library has enough technical books in hard copies to support the program learning. The internet access to the external universities libraries provides opportunities to the students and faculty to obtain knowledge from their technical resources.

The library is staffed with more than 8 professionals to help students and faculty members to get access to required books or learning material efficiently.

## **9.3 Standard 7-3**

**Class-rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibilities.**

Enough class rooms are available to run the program as per desired schedule. In few class rooms, there is a need of up-gradation of multimedia and other resources (details are in the implementation plan). The work orders have been initiated and procurement process is in progress.

# **10.0 Criterion 8: Institutional Support**

## **10.1 Standard 8-1**

**There must be sufficient support and financial resources to attract and retain high quality faculty and provide the means for them to maintain competence as teachers and scholars.**

University allocates enough financial resources each year to hire competent faculty as required. Faculty members are retained by giving them good remuneration, favorable teaching environment, research facilities and management support.

Faculty members are also provided adequate resources for research and academic activities to maintain their competence. Every faculty member has been provided computer system and access to internet. Faculty members have also access to library materials for academic and research activities. Professional training is also provided to faculty if required to enhance their capabilities.

## **10.2 Standard 8-2**

**There must be an adequate number of high quality graduate students, research assistants and Ph.D. students.**

The university follows the guidelines of HEC for admission in this program. The number of graduate students during the last three years is 300.

## **10.3 Standard 8-3**

**Financial resources must be provided to acquire and maintain Library holdings, laboratories and computing facilities.**

Library at Riphah holds more than 50000 books for all programs. Sufficient numbers of computers are available to be used by the students. Library is organized to accommodate a large number of students (male, female) in research cubicles as well as in the common places. Separate common rooms for male and female students are available with internet facility.

Laboratories at Riphah holds adequate equipment to be used by the students to carry out desired experiments and laboratory work. Each year a handful of budget is allocated for laboratories to maintain and upgrade the equipment and other facilities.

The computing facilities at Riphah are of excellent standards and provides platform to students to enhance their learning capabilities.

## **11.0 Conclusion**

The self assessment report of the Riphah College of Rehabilitation and Allied Health Sciences (RCR&AHS) Riphah International University, gives strengths and weaknesses of the program. The management is striving hard to improve infrastructure for establishment of conducive environments for studies. The faculty is imparting quality education, introducing innovative techniques and is conducting quality research to produce competent Physiotherapists. The report is based on, 8 criterion and 31 standards as given in HEC's Self-Assessment Manual. The program mission, objectives and outcomes are assessed and strategic plans are presented to achieve the goals, which are again measurable through definite standards. Teachers' evaluation revealed satisfactory standards. Alumni surveys revealed variable results with regards to knowledge, interpersonal skills, diagnostic skills and research aptitude. Weaknesses are identified which are related to sitting facilities, lack of extra-curricular activities for students, less

refresher courses for young faculty & training for support staff. Improvements in infrastructure and other aspects are suggested which are based upon set, well defined and approved criteria. Examinations are held on schedules, academic schemes are prepared well in advance, transparent admission, registration and recruiting policy, excellent student teacher ratio are some of the strong areas of this program. The numbers of courses along with titles and duration for each year, course contents for degree program, are thoroughly planned. Their efficacy was measured through different standards and it was found to be satisfactory.

Proper steps are taken to guide the students for program requirements, communication, meetings, tutorial system, tours, students-teacher interaction etc. As regards the process control covering admission, registration, recruiting policy, courses and delivery of material, academic requirements, performance and grading, university. Higher Education Commission, have set forth proper rules, which are properly followed. At present there are 36 competent faculty members. However, faculty members need motivation for advanced knowledge, research and external training.

Institutional facilities were measured through Criterion 3; infrastructure, library, class room and faculty offices and in each case, short comings and limitation are highlighted. Institutional facilities need to be strengthened. Accordingly, institutional support will greatly promote and strengthen academic, research, management and leadership capabilities.

In conclusion, the strong and weak areas of the program are as under:-

### **11.1 Strong Areas**

- Our DPT is the only program in South Asia which is accredited by World Confederation of Physical Therapy (WCPT)
- Excellent Students-Teacher Ratio
- A very powerful and expanded international library with online access to medical journals
- Keeping in view ISLAMIC VALUES inculcating state of the art education most of the students specifically girls' students prefer to join this institution.
- Curriculum design, development and organization are based upon set, well defined and approved criteria by HEC
- Clinical training/practice at Pakistan Railway Hospital, Riphah International hospital, Max Health Hospital and Riphah Executive Clinic.

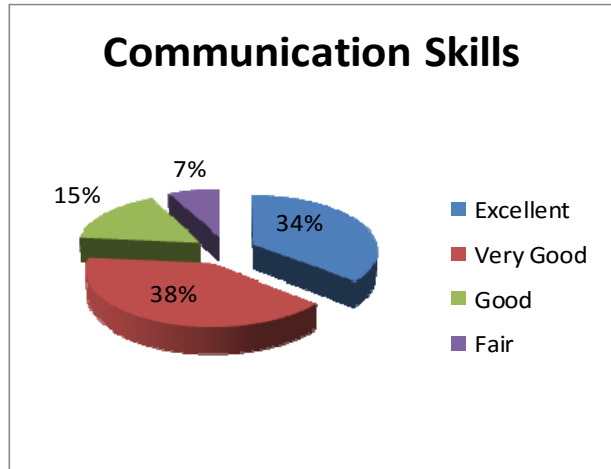
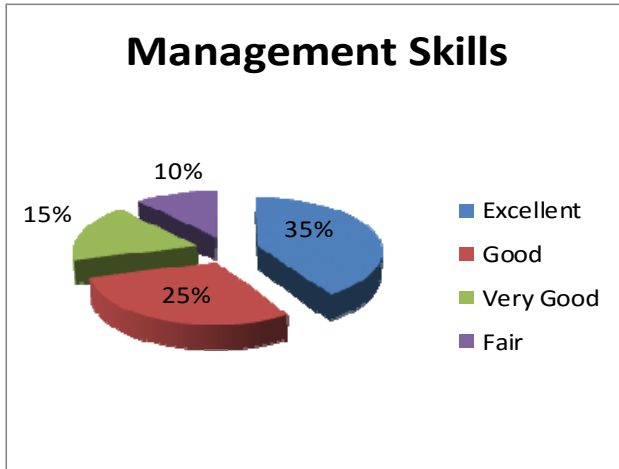
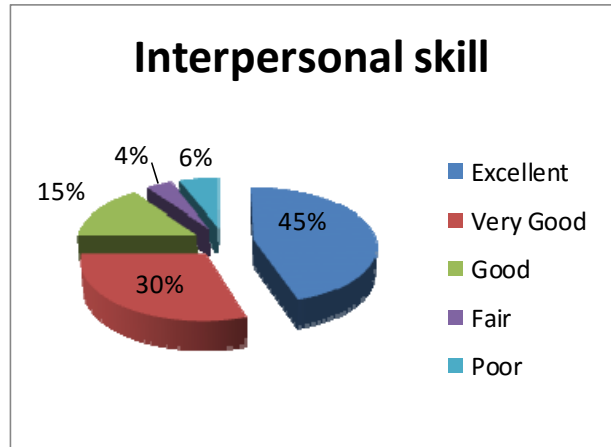
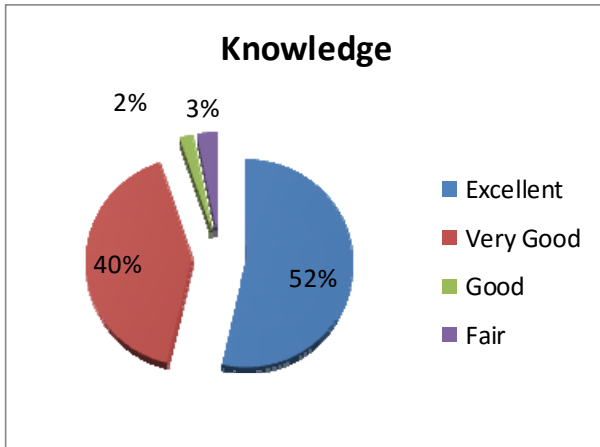
- Academic calendar is adhering to and examinations schedule prepared at the beginning of the year.
- Curriculum is accredited by HEC
- Numbers of Courses along with their titles and credit hours for each year, course contents for degree program are fully planned.
- Transparent admission, registration and recruiting policy
- Properly scheduled classes and examinations.
- Study visits across Pakistan
- Research oriented and evidence-based teaching
- Well quipped practical labs
- Well-equipped class rooms infrastructure
- Active Guidance/ Advisory process for students
- Extra-curricular activities

### **11.2 Area Requiring Focus**

- Lack of advance purpose-built exercise/skill lab.
- Lack of advance biomechanics/research lab.
- Lack of virtual reality/3D technology integration.
- Inadequate seating capacity in the class rooms
- Training of Junior Faculty members
- Lack of extra-curricular activities for students

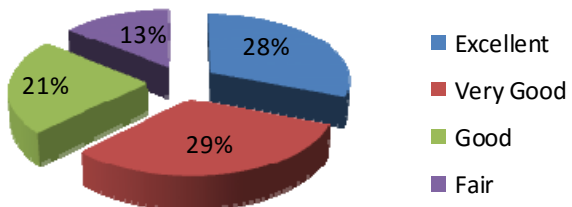
## Annexures

### Annexure – A: Alumni Survey

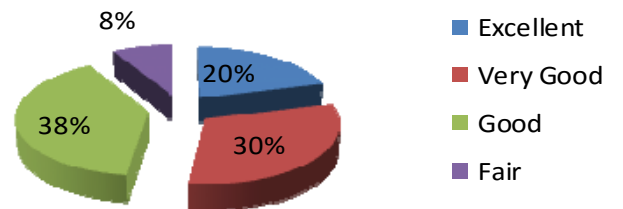


## Annexure – B: Employer Survey

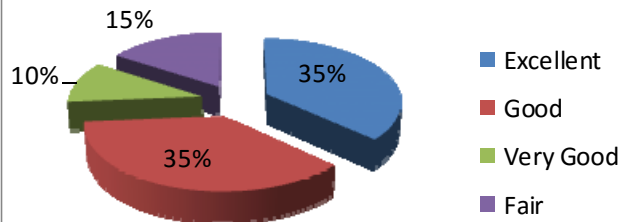
### Communication Skills



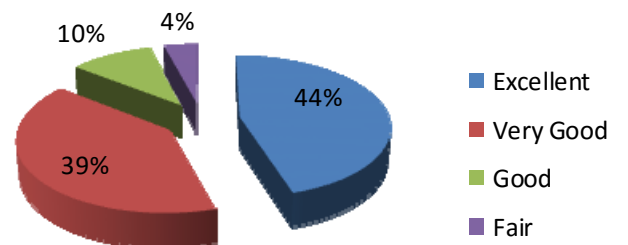
### Knowledge



### Interpersonal Skills























### Work Skills





















































## Annexure – C: Course Evaluation Survey (Sample Individual Course Report)

Course: Kinesiology

1. (1) The course objectives were clear.	
- 5:	 90 (75.00 %)
- 4:	 20 (16.67 %)
- 3:	 7 (5.83 %)
- 2:	 3 (2.50 %)
- 1:	 0
2. (2) The course workload was manageable	
- 5:	 86 (71.67 %)
- 4:	 23 (19.17 %)
- 3:	 8 (6.67 %)
- 2:	 3 (2.50 %)
- 1:	 0
3. (3) The length of the course was appropriate	
- 5:	 83 (69.17 %)
- 4:	 26 (21.67 %)
- 3:	 6 (5.00 %)
- 2:	 3 (2.50 %)
- 1:	 2 (1.67 %)
4. (4) Teaching methods encouraged participation	
- 5:	 81 (67.50 %)
- 4:	 24 (20.00 %)
- 3:	 13 (10.83 %)
- 2:	 1 (0.83 %)
- 1:	 1 (0.83 %)


















<b>5. (5) The Teacher strictly follows the goals and objectives of the course.</b>	
- 5:	 77 (64.17 %)
- 4:	 29 (24.17 %)
- 3:	 6 (5.00 %)
- 2:	 5 (4.17 %)
- 1:	 3 (2.50 %)
<b>6. (6) Learning materials (lesson plans, Course notes etc) were relevant and useful.</b>	
- 5:	 84 (70.00 %)
- 4:	 22 (18.33 %)
- 3:	 9 (7.50 %)
- 2:	 4 (3.33 %)
- 1:	 1 (0.83 %)
<b>7. (7) Recommended reading books etc were relevant and appropriate</b>	
- 5:	 76 (63.33 %)
- 4:	 23 (19.17 %)
- 3:	 15 (12.50 %)
- 2:	 1 (0.83 %)
- 1:	 5 (4.17 %)
<b>8. (8) I understood all the lectures</b>	
- 5:	 72 (60.00 %)
- 4:	 34 (28.33 %)
- 3:	 11 (9.17 %)
- 2:	 1 (0.83 %)
- 1:	 2 (1.67 %)
<b>9. (9) The pace of the course was appropriate</b>	
- 5:	 75 (62.50 %)
- 4:	 31 (25.83 %)



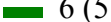
















- 3:	 12 (10.00 %)
- 2:	 1 (0.83 %)
- 1:	 1 (0.83 %)
<b>10. (10) The methods of assessments were fair</b>	
- 5:	 72 (60.00 %)
- 4:	 28 (23.33 %)
- 3:	 13 (10.83 %)
- 2:	 6 (5.00 %)
- 1:	 1 (0.83 %)
<b>11. (11) As a result of taking this course my interest and curiosity about the issues and questions in this subject area has grown</b>	
- 5:	 74 (61.67 %)
- 4:	 30 (25.00 %)
- 3:	 11 (9.17 %)
- 2:	 3 (2.50 %)
- 1:	 2 (1.67 %)
<b>12. (12) As a result of taking this course my thinking is more focused and systematic, at least in this subject area.</b>	
- 5:	 72 (60.00 %)
- 4:	 29 (24.17 %)
- 3:	 12 (10.00 %)
- 2:	 4 (3.33 %)
- 1:	 3 (2.50 %)
<b>13. (13) The material in the practical was useful (if applicable)</b>	
- 5:	 78 (65.00 %)
- 4:	 24 (20.00 %)
- 3:	 11 (9.17 %)
- 2:	 4 (3.33 %)





















- 1:	■ 2 (1.67 %)
<b>14. (14) In this course, I improved my ability to give sound reasons regarding issues in this subject area</b>	
- 5:	 69 (57.50 %)
- 4:	 35 (29.17 %)
- 3:	 9 (7.50 %)
- 2:	 6 (5.00 %)
- 1:	■ 1 (0.83 %)
<b>15. (15) Any suggestions to improve the course and/or its content.</b>	
- it's good.	
- nothing	
- no comments good teacher	
- Do add videos for demonstration	
- Satisfied	
- no	

# Annexure – D: Course Evaluation Survey (Sample Individual Course Report)

Faculty:Dr. Nazish Rafique  
Course:Kinesiology-I




















1. (Undertaking) I confirm that evaluation being done by me is all correct	
- Yes:	 117 (97.50 %)
- No:	 3 (2.50 %)
2. (1) The Teacher starts and finishes class on time	
- 5:	 92 (76.67 %)
- 4:	 20 (16.67 %)
- 3:	 4 (3.33 %)
- 2:	 2 (1.67 %)
- 1:	 2 (1.67 %)
3. (2) The Teacher comes duly prepared for the lecture in each class	
- 5:	 93 (77.50 %)
- 4:	 16 (13.33 %)
- 3:	 6 (5.00 %)
- 2:	 2 (1.67 %)
- 1:	 3 (2.50 %)
4. (3) The Teacher utilizes full time of class focusing on the subject matter	
- 5:	 87 (72.50 %)
- 4:	 26 (21.67 %)
- 3:	 2 (1.67 %)
- 2:	 3 (2.50 %)
- 1:	 2 (1.67 %)








<b>5. (4) The Teacher demonstrates knowledge of the subject</b>	
- 5:	 89 (74.17 %)
- 4:	 22 (18.33 %)
- 3:	 6 (5.00 %)
- 2:	 1 (0.83 %)
- 1:	 2 (1.67 %)
<b>6. (5) The Teacher has covered the whole course</b>	
- 5:	 89 (74.17 %)
- 4:	 24 (20.00 %)
- 3:	 4 (3.33 %)
- 2:	 1 (0.83 %)
- 1:	 2 (1.67 %)
<b>7. (6) The Teacher is available for after class consultations during the specified office hours.</b>	
- 5:	 75 (62.50 %)
- 4:	 27 (22.50 %)
- 3:	 13 (10.83 %)
- 2:	 2 (1.67 %)
- 1:	 3 (2.50 %)
<b>8. (7) The Teacher provides additional material/books/internet references apart from the text book</b>	
- 5:	 70 (58.33 %)
- 4:	 28 (23.33 %)
- 3:	 11 (9.17 %)
- 2:	 7 (5.83 %)

- 1:	 4 (3.33 %)
<b>9. (8) The Teacher communicates the subject matter clearly and effectively</b>	
- 5:	 85 (70.83 %)
- 4:	 23 (19.17 %)
- 3:	 6 (5.00 %)
- 2:	 4 (3.33 %)
- 1:	 2 (1.67 %)
<b>10. (9) The Teacher maintains a conducive environment in the class</b>	
- 5:	 79 (65.83 %)
- 4:	 27 (22.50 %)
- 3:	 10 (8.33 %)
- 2:	 2 (1.67 %)
- 1:	 2 (1.67 %)
<b>11. (10) The Teacher shows respect towards students and encourages class participation</b>	
- 5:	 82 (68.33 %)
- 4:	 25 (20.83 %)
- 3:	 10 (8.33 %)
- 2:	 1 (0.83 %)
- 1:	 2 (1.67 %)
<b>12. (11) The Teacher ensures equitable participation of the students in the class</b>	
- 5:	 82 (68.33 %)
- 4:	 26 (21.67 %)
- 3:	 8 (6.67 %)
- 2:	 2 (1.67 %)

- 1:	■ 2 (1.67 %)
<b>13. (12) The Teacher is fair in exams and grading</b>	
- 5:	■ 77 (64.17 %)
- 4:	■ 26 (21.67 %)
- 3:	■ 13 (10.83 %)
- 2:	■ 1 (0.83 %)
- 1:	■ 3 (2.50 %)
<b>14. (13) The Teacher checks and returns assignments/exams and scripts, in time</b>	
- 5:	■ 69 (57.50 %)
- 4:	■ 29 (24.17 %)
- 3:	■ 13 (10.83 %)
- 2:	■ 3 (2.50 %)
- 1:	■ 6 (5.00 %)
<b>15. (14) The Teacher relates current lesson content to previous and future lessons</b>	
- 5:	■ 82 (68.33 %)
- 4:	■ 26 (21.67 %)
- 3:	■ 8 (6.67 %)
- 2:	■ 2 (1.67 %)
- 1:	■ 2 (1.67 %)
<b>16. (15) The teacher takes extra steps to elevate competency level of weak students</b>	
- 5:	■ 74 (61.67 %)
- 4:	■ 23 (19.17 %)
- 3:	■ 17 (14.17 %)
- 2:	■ 2 (1.67 %)



- 1:	 4 (3.33 %)
<b>17. (16) The Teacher accepts and incorporates student's ideas, questions and responses.</b>	
- 5:	 74 (61.67 %)
- 4:	 29 (24.17 %)
- 3:	 11 (9.17 %)
- 2:	 4 (3.33 %)
- 1:	 2 (1.67 %)
<b>18. (17) The Teacher make use of audio/visual aids to make the lectures interesting</b>	
- 5:	 65 (54.17 %)
- 4:	 28 (23.33 %)
- 3:	 18 (15.00 %)
- 2:	 5 (4.17 %)
- 1:	 4 (3.33 %)
<b>19. (18) The Teacher uses easy and understandable vocabulary for students</b>	
- 5:	 81 (67.50 %)
- 4:	 26 (21.67 %)
- 3:	 9 (7.50 %)
- 2:	 2 (1.67 %)
- 1:	 2 (1.67 %)
<b>20. (19) During the teaching, the teacher display the enthusiasm towards the subject and teaching -motivation to subject interest</b>	
- 5:	 71 (59.17 %)
- 4:	 38 (31.67 %)
- 3:	 7 (5.83 %)

- 2:	 1 (0.83 %)
- 1:	 3 (2.50 %)
<b>21. (20) The teacher is using VLE/Moelim for academic activities (assignments/quizzes/notes)</b>	
- 5:	 86 (71.67 %)
- 4:	 24 (20.00 %)
- 3:	 5 (4.17 %)
- 2:	 3 (2.50 %)
- 1:	 2 (1.67 %)
<b>22. (21) Any comments about teacher</b>	
-	Little Bit Strick Teacher
-	Best teaching style
-	a good teacher

**Annexure – E:**
**Research Papers List (Last 3 Years)**

S. No	Name	Title	Journal Name	Year
1.	Saira Jahan	Comparing fasting homocysteine levels among healthy adults, diabetic and non-diabetic cardiac patients	JRCRS	2019
2.	Saira Jahan	Association of maternal obesity and preeclampsia with gestational diabetes mellitus: a comparison of GDM & non GDM mothers in pakistan railway hospital Rawalpindi	Khyber medical university journal	2018
3.	Tahir Ramzan	Combined Effect of Aerobic and Resistance Interval Training on Ejection Fraction in Myocardial Infarction	JCPSP	2019
4.	Tahir Ramzan	Comparing Fasting Homocysteine Levels Among Healthy Adults, Diabetic and Non-Diabetic Cardiac Patients	JRCRS	2018
5.	Irum Yaqoob	Physical activity and cognitive dysfunction Associated with type 2 diabetes mellitus: a review article.	Independent Journal Of Allied Health Sciences	2018
6.	Irum Yaqoob	Functional ability and quality of life of below knee amputee with prosthesis	Rawal Medical Journal	2018
7.	Irum Yaqoob	Effects of Combined Aerobic and Virtual Reality-Based Cognitive Training on 76 Years Old Diabetic Male with Mild Cognitive Impairment	JCPSP	2018
8.	Irum Yaqoob	Effects of Kabat rehabilitation verses taping to reduce facial disability and Synkinesis in Bell's Palsy	Rawal Medical Journal	2018
9.	Irum Yaqoob	Effectiveness of balance training on quality of life in osteoporotic women	Rawal Medical Journal	2018
10.	Dr.Misbah Ghous	Let the ignorance unfold, Use of standardized outcome measures in physiotherapy practice in Pakistan	Journal of Pakistan Medical association	2018
11.	Dr.Misbah Ghous	Effects of activity repetition training with Salat (prayer) versus task oriented training on functional outcomes of stroke	Journal of Pakistan Medical association	2017
12.	Dr.Misbah Ghous	High Repetitions of Salat Activity In stroke rehabilitation	Rawal Medical journal	2017
13.	Dr.Misbah Ghous	Sit to stand is the precedent of balance and functional mobility in stroke	Journal of Riphah College of Rehabilitation Sciences	2017
14.	Dr.Misbah Ghous	Effects of Kabat rehabilitation verses taping to reduce facial disability and synkinesis in facial disability	Rawal Medical journal	2018
15.	Dr.Misbah Ghous	Comparison between Manual Traction, Manual Opening technique and Combination in Patients with cervical radiculopathy: Randomized control Trial	JPMA	2019

16.	Dr.Misbah Ghous	Effects of turning and cognitive training in fall prevention with dual task training in elderly with balance impairment	Rawal Medical Journal	2018
17.	Dr.Misbah Ghous	Proprioception deficits: frequency of balance and proprioception deficits in elderly population of old homes of twin cities of pakistan	The professional medical journal	2018
18.	Dr.Misbah Ghous	The Association between Physical activity with Cognitive and Cardiovascular Deconditioning in Age Related Decline of College Students	Journal of Pakistan Medical association	2018
19.	Syed Ali Hussain	Comparison of Short Term Outcomes Between Dry Needling and Manual Therapy on Upper Trapezius Trigger Points	Journal of Riphah College of Rehabilitation Sciences	2017
20.	Dr Iqbal Tariq	Frequency of Musculoskeletal Impairment in Different Professionals Teachers, Bankers and Medical Professional.	JRCRS	2017
21.	Dr Iqbal Tariq	Effect of Early $\leq 3$ Mets (Metabolic Equivalent of Tasks) of Physical Activity on Patient's Outcome after Cardiac Surgery	JCPSP	2017
22.	Dr Iqbal Tariq	Effects of turning and cognitive training in fall prevention with dual task training in elderly with balance impairment	Rawal Medical Journal	2018
23.	Dr Iqbal Tariq	Effects Of Lower Limb Cycle Training On Echocardiographic Parameters Of Left Ventricle In Dilated Cardiomyopathy Patients	JCPSP	2018
24.	Dr Iqbal Tariq	Comparison of Sustained Pressure vs Ischemic Compression on Trigger points In Chronic Myofascial Pain Management	KMU Journal	2018
25.	Dr Iqbal Tariq	The Association Between Physical activity with Cognitive And Cardiovascular Deconditioning In Age Related Decline Of College Students	JPMA	2018
26.	Dr Iqbal Tariq	Frequency of Cardiovascular risk factors among the athletes and non-athletes	JRCRS	2018
27.	Dr Iqbal Tariq	Effect of chest physical therapy with early mobilization on post-operative pulmonary complications in upper abdominal surgeries	Rawal Medical Journal	2019
28.	Dr Iqbal Tariq	Combined Effect of Aerobic and Resistance Interval Training on Ejection Fraction in Myocardial Infarction	JCPSP	2019
29.	Dr Suman Sheraz	Effects of supervised exercise on sleep deprivation and quality of life in patients with depression	Rawal medical journal	2019
30.	Dr Suman Sheraz	Impact of low intensity physical activity on the vitals of normal individuals with varying BMI	Journal of Riphah college of rehabilitation sciences	2018
31.	Dr. Muhammad Affan Iqbal	Effectiveness of Piriformis Stretching, Sciatic Nerve Mobilization and Their	JRCRS	2017

		Combination to Improve Pain and Hip ROM in Patients with Piriformis Syndrome		
32.	Dr Huma Riaz	Risk Factors of Non-specific neck pain in students: Case Control Study	Journal of Riphah College of Rehabilitation Sciences	2018
33.	Dr Huma Riaz	Fear avoidance beliefs contribute to chronicity and severity of neck pain	Rawal Medical Journal	2017
34.	Dr.Maria khalid	Association of gestational diabetes mellitus with maternal obesity and preeclampsia	Khyber Medical University Journal	2018
35.	Dr.Aruba Saeed	Level of Physical Activity And Perceived Exertion After Aerobic Training In Females	<i>Rawal Medical Journal</i>	2018
36.	Dr.Aruba Saeed	Frequency of Balance and Proprioception Deficits in Elderly Population of old homes of Rawalpindi and Islamabad	<i>The professional Medical Journal</i>	2018
37.	Dr.Aruba Saeed	Risk Factors of Non Specific Neck Pain In Students: Case Control Study	<i>Journal of Riphah College of Rehabilitation Sciences</i>	2018
38.	Dr. Mir Arif Hussain	Comparative Effect of Driving side on Low Back Pain due to Repetitive Ipsilateral Rotation	Pakistan Journal of Medical Sciences	2019
39.	Dr. Mir Arif Hussain	Inhibition of hyperuricemia and gouty arthritis in mice using copper nanoparticles	Biological Trace Element Research	2019
40.	Dr. Mir Arif Hussain	Frequency of back pain in security guards/work environment factors	Journal of Riphah College of Rehabilitation Sciences	2018
41.	Dr. Mir Arif Hussain	Measurement of Quadriceps angle in Females with chronic Knee pain	Independent Journal of Allied Health Science	2018
42.	Dr. Mir Arif Hussain	Mechanical Diagnosis and Therapy in Shoulder Derangement, a Case Report	International Journal of Health & Rehabilitation Sciences	2018
43.	Dr Waqar Ahmed Awan	The effectiveness of an incentivized physical activity programme (Active Student) among female medical students in Pakistan:	Journal of Pakistan Medical Association	2018
44.	Dr Waqar Ahmed Awan	Effectiveness of kinesio taping with oromotor exercises in improving drooling in cerebral palsy children.	The Rehabilitation Journal (TRJ)	2018
45.	Dr Waqar Ahmed Awan	A randomized controlled trial of intermittent Cervical Traction in sitting Vs. Supine position for the management of Cervical Radiculopathy.	Pakistan Journal of Medical Sciences	2017
46.	Dr Waqar Ahmed Awan	Effectiveness of digital manipulation of thyroid cartilage in the management of stuttering in adults.	Khyber Medical University Journal	2017
47.	Dr Waqar Ahmed Awan	Effectiveness of grade I, II kaltenborn mobilization in stage I adhesive capsulitis.	The Rehabilitation Journal (TRJ)	2017
48.	Dr Waqar Ahmed Awan	Effectiveness of therapeutic ultrasound with or without thumb spica splint in the management of De Quervain's disease.	Journal of back and musculoskeletal rehabilitation	2017
49.	Dr Waqar Ahmed	Effectiveness of stretching exercises in	Pakistan Journal of	2017

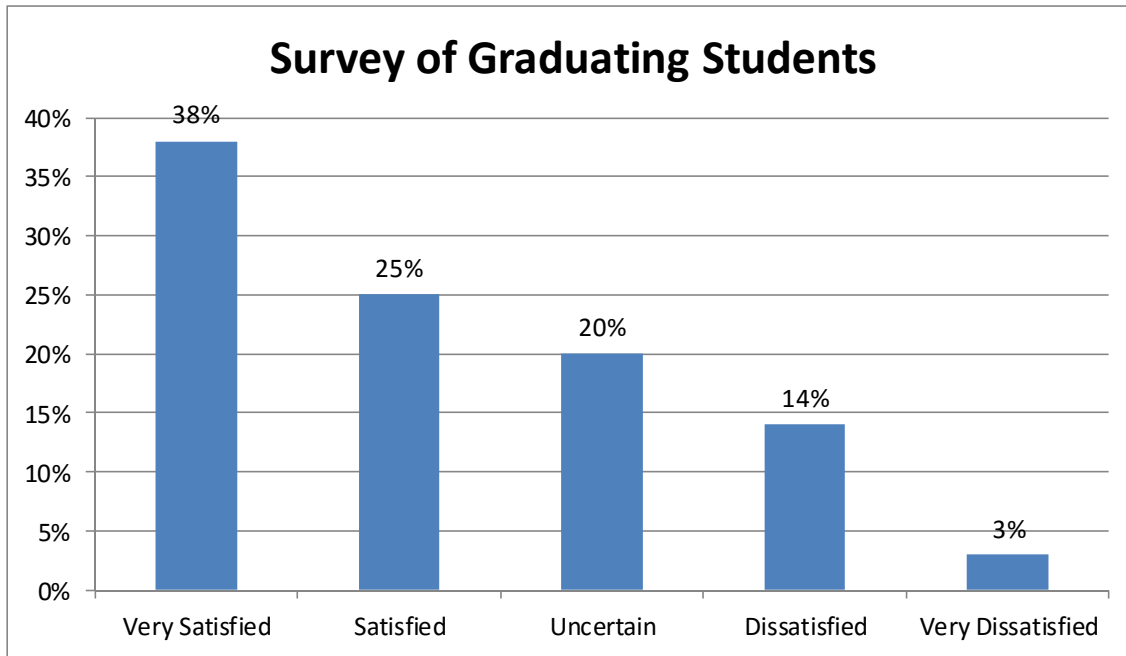
	Awan	symptomatic and asymptomatic phase in primary dysmenorrhoea	Physiology	
50.	Dr Waqar Ahmed Awan	Effectiveness of TENS versus stretching exercises on primary dysmenorrhea in students.	International Journal of Rehabilitation Sciences	2017
51.	Dr Waqar Ahmed Awan	Effects of isokinetic strength training on subjective and objective knee performance of an anterior cruciate ligament (ACL) injured athlete.	Journal of Medical Sciences	2017
52.	Dr.Imran Amjad	The effects of a single session of chiropractic care on strength, cortical drive, and spinal excitability in stroke patients. Holt K, Niazi IK, Nedergaard RW, Duehr J, Amjad I, Shafique M, Anwar MN, Ndetan H, Turker KS, Haavik H. Scientific reports	Nature Scientific reports	2019
53.	Dr.Imran Amjad	Effect of aerobic exercise on electroencephalogram parameters and cognitive functions in patients with mild cognitive impairment. Imran Amjad, Hamza Ghazanfar Mehmood Toor, Imran Khan Niazi, Hina Afzal, Mads Jochumsen, Muhammad Shafique, Kathryn Allen, Heidi Haavik Touqeer Ahmed. International Journal of Neuroscience	International Journal of Neuroscience	2019
54.	Dr.Imran Amjad	Xbox 360 Kinect Cognitive Games Improve Slowness, Complexity of EEG, and Cognitive Functions in Subjects with Mild Cognitive Impairment: A Randomized Control Trial I Amjad, H Toor, IK Niazi, S Pervaiz, M Jochumsen, M Shafique, H Haavik, Games for health journal	Games for health journal	2019
55.	Dr.Imran Amjad	Combined Effect of Aerobic and Resistance Interval Training on Ejection Fraction in Myocardial Infarction	JCPSP	2019
56.	Dr.Imran Amjad	Does Wii Fit balance training improve balance and reduce fall risk in diabetic patients as compared to balance training exercises? A randomized control trial	Rawal Medical Journal	2018
57.	Dr.Imran Amjad	Effect of supervised exercise on sleep deprivation and quality of life in patients with depression	Rawal Medical Journal	2018
58.	Dr.Imran Amjad	The effect of aerobic exercises on balance in diabetic neuropathy patients	Journal Of Medical Sciences	2018
59.	Dr.Imran Amjad	Effects of Lower Limb Cycle Training on Echocardiographic Parameters of Left Ventricle in Dilated Cardiomyopathy Patients.	JCPSP	2018

60.	Dr.Imran Amjad	Effect of balance training in older adults using Wii fit plus SA Ayesha Afridi, Imran Amjad, Arshad Nawaz Malik Journal of Pakistan Medical Association 68 (3), 480-483	The Journal of the Pakistan Medical Association	2018
61.	Dr.Imran Amjad	Effect of circuit gait training vs traditional gait training on mobility performance in stroke ANM Qurat-ul-Ain, Imran Amjad Journal of Pakistan Medical Association 68 (3), 455-458	The Journal of the Pakistan Medical Association	2018
62.	Dr.Imran Amjad	Effects of turning and cognitive training in fall prevention with dual task training in elderly with balance impairment IT	Rawal Medical Journal	2018
63.	Dr.Imran Amjad	Response to a Supervised Structured Aerobic Exercise Training Program in Patients with Type 2 Diabetes Mellitus– Does Gender Make a Difference? A Randomized Controlled Clinical Trial. Journal of the National Medical Association	The Journal of the Pakistan Medical Association	2017
64.	Dr.Imran Amjad	Descriptive Analysis Of Persons With Traumatic Spinal Cord Injury In Pakistan, World Confederation for Physical Therapy		2017
65.	Dr.Imran Amjad	Effect of Early≤ 3 Mets (Metabolic Equivalent of Tasks) of Physical Activity on Patient's Outcome after Cardiac Surgery.	JCPSP	2017
66.	Dr.Imran Amjad	The effects of gait training with body weight support (BWS) with no body weight support (no-BWS) in stroke patients. JPMA The Journal of the Pakistan Medical Association	The Journal of the Pakistan Medical Association	2017
67.	Dr.Imran Amjad	Effects of activity repetition training with Salat (prayer) versus task oriented training on functional outcomes of stroke. JPMA The Journal of the Pakistan Medical Association	The Journal of the Pakistan Medical Association	2017
68.	Dr.Imran Amjad	Comparison of low level laser therapy and interferential current on post stroke shoulder pain. JPMA The Journal of the Pakistan Medical Association	The Journal of the Pakistan Medical Association	2017
69.	Dr.Imran Amjad	Effects Of Exergaming On Fall Risk Reduction And Mobility Improvement In Elderly: A Pre-Post Quasi Interventional Study	International Journal of Rehabilitation Sciences	2017
70.	Dr.Imran Amjad	Expectation of patients from physiotherapist	Rawal Medical Journal	2017
71.	Dr.Ayesha Kamal Butt	Perception of speech and language pathologists towards augmentative and	Journal of the Pakistan Medical Association	2017

		alternative communication in Pakistan		
72.	Dr.Ayesha Kamal Butt	Mode of tele-communication and software used by children with hearing impairment	Biomedical Research	2018
73.	Abdul Ghafoor Sajjad	<u>The effect of deep cross friction massage on spasticity of children with cerebral palsy: A double-blind randomised controlled trial</u>	The Journal of the Pakistan Medical Association	2017
74.	Abdul Ghafoor Sajjad	Chronic Low Back Pain; Effects Of The Lumbar Stabilization Exercises On Pain, Range Of Motion And Functional Disability In The Management	The Professional Medical Journal	2017
75.	Abdul Ghafoor Sajjad	<u>Association Between Student Life Stress Inventory Scale Score And Cortisol Hormonal Test Value In Undergraduate DPT Students</u>	International Journal of Rehabilitation Sciences	2017
76.	Abdul Ghafoor Sajjad	Comparison of Manual Therapy Techniques in Adhesive Capsulitis	JIIMC	2017
77.	Abdul Ghafoor Sajjad	Effectiveness of Kaltenborn mobilization in mid-range and end-range in patients with adhesive capsulitis Fareeha Kouser, Abdul Ghafoor Sajjad, Sumera Amanat, Qamar Mehmood RMJ. 2017; 42(4): 559-562	RMJ	2017
78.	Abdul Ghafoor Sajjad	Effect of spinal decompression with and without segmental mobilization in patients with posterolateral lumbar disc protrusion.	RMJ	2018
79.	Abdul Ghafoor Sajjad	Comparison of Short Term Outcomes Between Dry Needling and Manual Therapy on Upper Trapezius Trigger Points	<u>JRCRS</u>	2018
80.	Abdul Ghafoor Sajjad	Comparison of Sustained Pressure Vs Ischemic Compression On Trigger Points In Chronic Myofascial Pain Management.	Khyber Medical University Journal.	2018
81.	Dr.Mehwish Wasim	Effects of Lower Cycle Training on Echocardiographic Parameters of Left Ventricle in Dilated Cardiomyopathy Patients	Journal of College of Physician and Surgeons Pakistan	2018
82.	Dr.Mehwish Wasim	Comparing Fasting Homocysteine Levels Among Healthy Adults, Diabetic and Non-Diabetic Cardiac Patients.	Journal of Riphah College of Rehabilitation Sciences	2018

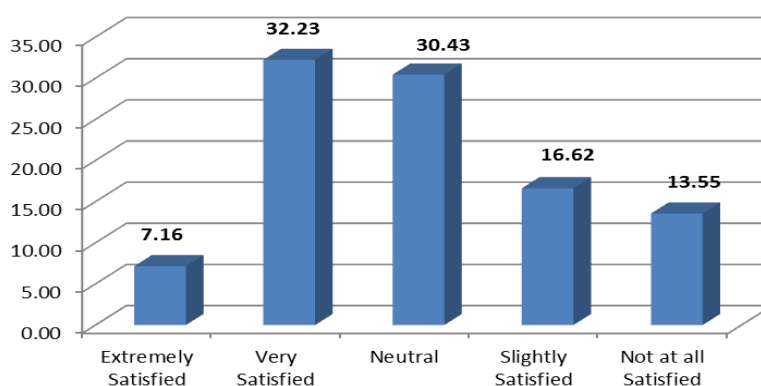


**Annexure – F:      Survey of Graduating Students**



## Annexure – G: Faculty Survey

No.	Questions	Percentage				
		Extremely Satisfied	Very Satisfied	Neutral	Slightly Satisfied	Not at all Satisfied
1	Clarity of institution's goals/mission	13.04	43.48	26.09	17.39	0.00
2	Communications from/with peers and faculty/departmental leadership	8.70	34.78	34.78	8.70	13.04
3	Type of teaching/ research you currently do..	8.70	52.17	34.78	4.35	0.00
4	Your interaction with students in and outside classroom	30.43	47.83	21.74	0.00	0.00
5	Your satisfaction level regarding office and IT facilities available to you.	0.00	4.35	17.39	30.43	47.83
6	The mentoring available to you from seniors	8.70	52.17	8.70	21.74	8.70
7	Administrative support from the faculty/department.	4.35	34.78	17.39	17.39	26.09
8	Clarity and Satisfaction about the faculty promotion process.	4.35	17.39	34.78	17.39	26.09
9	Your prospects for advancement and progress through ranks.	0.00	30.43	43.48	17.39	8.70
10	Salary and compensation package.	0.00	4.35	30.43	26.09	39.13
11	Job security and stability at the faculty/department/university.	8.70	30.43	52.17	4.35	4.35
12	Amount of time you have for yourself and family.	0.00	8.70	30.43	26.09	34.78
13	The overall environment in the department.	0.00	39.13	30.43	21.74	8.70
14	Adequacy of technological & multimedia instructional resources in classrooms	0.00	30.43	43.48	17.39	8.70
15	Whether the department is utilizing your experience and knowledge.	17.39	39.13	26.09	17.39	0.00
16	Recognition/appreciation of good teaching by seniors	8.70	26.09	34.78	26.09	4.35
17	Opportunities for research in your discipline and recognition of research accomplishment	8.70	52.17	30.43	8.70	0.00
		7.16	32.23	30.43	16.62	13.55



## Annexure – H: Faculty List (Updated)

Faculty Member	Gender	Nationality	Designation	Highest Degree	Name of University of Highest Degree	CNIC No. (e.g. 601101-8343126-9)	Faculty Type (Full Time or Visiting/ Part Time)	Date of Joining (DD/MM/YYYY)	Relieving Date (DD/MM/YYYY)
Syed Shakil ur Rehman	Male	Pakistani	Professor	Ph.D.	University of Lahore	42301-3862056-3	Permanent	01/02/2008	
Ayesha Kamal Butt	Female	Pakistani	Associate Professor	Ph.D.	IFUGAO State University	61101-2515680-0	Permanent	25/02/2011	
Arshad Nawaz Malik	Male	Pakistani	Associate Professor	DPT	Riphah International University	37203-1496677-5	Permanent	12/01/2011	29/09/2017
Abdul Ghafoor Sajjad	Male	Pakistani	Associate Professor	MS	Riphah International University	42401-1733338-3	Permanent	08/08/2012	
Mir Arif Hussain	Male	Pakistani	Assistant Professor	MS	Karachi University	45203-5065354-3	Permanent	19/02/2018	
Huma Riaz	Female	Pakistani	Assistant Professor	MS	Riphah International University	35202-2268029-4	Permanent	20/10/2010	
Mirza Obaid Baig	Male	Pakistani	Assistant Professor	MS	Karachi University	42101-1389268-9	Permanent	03/05/2017	
Imran Amjad	Male	Pakistani	Assistant Professor	MS	Riphah International University	31203-9722793-7	Permanent	12/04/2011	
Mubin Mustafa	Male	Pakistani	Assistant Professor	M.Phil	Quaid-e-Azam University	37405-0990938-1	Permanent	06/02/2008	
Shakeel Ahmad	Male	Pakistani	Assistant Professor	MS	Ziauddin Medical University	42401-2062185-7	Permanent	02/09/2014	
Suman Sheraz	Female	Pakistani	Assistant Professor	MS	Riphah International University	37405-7301001-6	Permanent	11/09/2014	
Muham mad Affan Iqbal	Male	Pakistani	Assistant Professor	MS	Riphah International University	33202-4478877-7	Permanent	06/02/2016	
Humaira Shamim	Female	Pakistani	Assistant Professor	MS	Riphah International University	37401-0672855-4	Permanent	05/05/2017	

Sumaiyah Obaid	Female	Pakistani	Assistant Professor	MS	Karachi University	42301-1600513-2	Permanent	03/05/2017	
Muhammad Iqbal Tariq	Male	Pakistani	Lecturer	MS	Riphah International University	37405-7253642-3	Permanent	15/02/2016	
Aruba Saeed	Female	Pakistani	Lecturer	MS	University of Health & Science	35202-2022522-4	Permanent	11/09/2014	
Irum Nawaz	Female	Pakistani	Assistant Professor	MS	Riphah International University	37405-5295908-0	Permanent	13/09/2013	
Soabah Wasim	Female	Pakistani	Lecturer	MS	University of North Carolina	61101-1910669-8	Permanent	04/09/2015	
Nazish Rafique	Female	Pakistani	Lecturer	MS	Karachi University	42101-7516643-4	Permanent	01/03/2018	
Ibad Ullah	Male	Pakistani	Lecturer	MS	Riphah International University	17101-0705990-9	Permanent	02/05/2011	18/02/2018
Syed Ali Hussain	Male	Pakistani	Lecturer	MS	Riphah International University	37401-2230631-3	Permanent	15/11/2016	
Rabia Zubair	Female	Pakistani	Lecturer	MS	Riphah International University	61101-2439955-6	Permanent	02/06/2017	
Raffa Mubeen	Female	Pakistani	Lecturer	MS	Riphah International University	37201-7217054-0	Permanent	06/09/2014	
Muhammad Faheem Afzal	Male	Pakistani	Lecturer	MS	Riphah International University	35201-8929702-7	Permanent	20/04/2016	
Sania Khawar Kiani	Female	Pakistani	Lecturer	M.Phil	Quaid-e-Azam University	61101-1504241-8	Permanent	11/09/2014	
Misbah Marryam	Female	Pakistani	Lecturer	MS	Riphah International University	37405-7666741-6	Permanent	18/04/2016	07/01/2018
Mohammad Sharifullah	Male	Pakistani	Lecturer	MS	Riphah International University	15602-3382922-3	Permanent	02/04/2015	
Syeda Qurra-tul-ain	Female	Pakistani	Lecturer	DPT	Riphah International University	61101-6621275-8	Permanent	19/04/2016	24/10/2017

Mehwish Waseem Butt	Female	Pakistani	Lecturer	MS	Riphah International University	37405-4569546-8	Permanent	05/06/2017	
Danish Latif	Male	Pakistani	Lecturer	MS	Riphah International University	35301-3884628-9	Permanent	20/02/2018	
Irum Yaqoob	Female	Pakistani	Lecturer	MS	Riphah International University	37405-3328538-6	Permanent	02/05/2017	
Lal Gul Khan	Male	Pakistani	Lecturer	MS	Karachi University	37405-0390780-5	Permanent	15/02/2016	
Saira Fahad	Female	Pakistani	Lecturer	MS	Riphah International University	36302-0337196-6	Permanent	20/09/2013	
Amna Yaseen	Female	Pakistani	Lecturer	DPT	Riphah International University	34201-5730186-6	Permanent	15/09/2014	
Misbah Ghous	Female	Pakistani	Lecturer	MS	Riphah International University	37201-9741294-4	Permanent	22/04/2016	
Sadia Ashraf	Female	Pakistani	Lecturer	MS	Riphah International University	37405-4617905-2	Permanent	21/02/2007	
Rashid Hafeez Nasir	Male	Pakistani	Assistant Professor	M.Phil	King Edward Medical University Lahore	35202-2760548-5	Permanent	06/03/2013	
Muhammad Salman Bashir	Male	Pakistani	Associate Professor	M.Phil	King Edward Medical University Lahore	36501-9487078-7	Permanent	01/03/2018	
Rabiya Noor	Female	Pakistani	Assistant Professor	MBBS	Riphah International University	35202-3015248-2	Permanent	01/03/2018	
Adnan Afzal	Male	Pakistani	Assistant Professor	DPT	Still University of Health Sci	35202-8268399-1	Permanent	30/09/2015	
Rifat Asghar Gill	Female	Pakistani	Assistant Professor	MS	Riphah International University	35101-0349656-6	Permanent	03/04/2017	01/03/2018
Maryam Shabbir	Female	Pakistani	Assistant Professor	MS	Riphah International	35201-8804624-	Permanent	16/07/2012	

					al University	8			
Saima Zahid	Female	Pakistani	Assistant Professor	MS	Riphah International University	35303-1998889-6	Permanent	16/02/2016	
Atif Dustagir	Male	Pakistani	Assistant Professor	MS	Riphah International University	35202-1035306-5	Permanent	18/09/2014	
Nayab Iftikhar	Female	Pakistani	Assistant Professor	Ph.D.	IFUGAO State University	34201-3042919-4	Permanent	02/10/2013	
Muham mad Irfan Siddiqi	Male	Pakistani	Lecturer	MS	King Edward Medical University Lahore	36301-0579988-1	Permanent	10/02/2016	30/07/2017
Danish Hassan	Male	Pakistani	Lecturer	MS	Riphah International University	33202-2382382-3	Permanent	15/04/2015	
Hina Saleem	Female	Pakistani	Lecturer	MS	Fatima Jinnah Women University	37405-5059282-0	Permanent	10/07/2017	
Muham mad Asif Javed	Male	Pakistani	Lecturer	MS	Riphah International University	35201-1643932-1	Permanent	21/03/2018	
Sana Hafeez	Female	Pakistani	Lecturer	MS	King Edward Medical University Lahore	34201-3258270-0	Permanent	16/02/2016	
Safia Firdous	Female	Pakistani	Lecturer	M.Phil	Punjab University	32203-1863217-2	Permanent	26/09/2017	
Sajid Ali	Male	Pakistani	Lecturer	MS	King Edward Medical University Lahore	38302-1120569-1	Permanent	15/08/2016	13/05/2018
Iram Shafee	Female	Pakistani	Lecturer	MS	Riphah International University	35101-4951858-0	Permanent	20/02/2012	
Hira Mannan	Female	Pakistani	Lecturer	MS	Riphah International University	33301-7644356-0	Permanent	16/02/2016	16/02/2018
Hafsa Noreen	Female	Pakistani	Lecturer	MS	Riphah International University	35202-9555278-2	Permanent	15/08/2016	

Misbah Waris	Female	Pakistani	Lecturer	MS	Riphah International University	35404-9393333-8	Permanent	13/03/2017	
Khadija Liaquat Ali	Female	Pakistani	Lecturer	MS	Riphah International University	35202-5337200-6	Permanent	29/03/2018	
Muham mad Sanaullah	Male	Pakistani	Lecturer	MS	Riphah International University	35302-9902076-1	Permanent	26/03/2018	
Iqra Ismail	Female	Pakistani	Lecturer	MS	Riphah International University	35202-1327450-6	Permanent	05/03/2018	19/03/2018
Tehreem Adnan	Female	Pakistani	Lecturer	MS	Riphah International University	31303-9699328-4	Permanent	26/09/2017	
Zeest Hashmi	Female	Pakistani	Lecturer	MS	Riphah International University	35200-3731456-8	Permanent	15/08/2016	
Raazia Altaf	Female	Pakistani	Lecturer	MBBS	University of Health & Science	35201-8036281-8	Permanent	01/03/2018	
Sumera Nawaz Malik	Female	Pakistani	Lecturer	MS	Riphah International University	35202-2948837-2	Permanent	01/10/2014	31/08/2017
Fahad Raza	Male	Pakistani	Lecturer	MS	Riphah International University	35202-3668462-5	Permanent	21/12/2016	
Taimoor Ul Hassan	Male	Pakistani	Lecturer	MS	Riphah International University	35501-0163132-1	Permanent	02/09/2014	30/07/2017
Muham mad Ikram Bilal	Male	Pakistani	Lecturer	BS	King Edward Medical University Lahore	35202-9709888-1	Permanent	11/01/2018	
Tamkana t Ilyas	Female	Pakistani	Lecturer	MS	Riphah International University	35202-0834664-0	Permanent	14/04/2015	
Muham mad Kashif	Male	Pakistani	Assistant Professor	MS	Anglia Ruskin University UK	33303-7919982-3	Permanent	02/02/2015	
Asif Ali Butt	Male	Pakistani	Associate Professor	Ph.D.	University of Agriculture	33100-0734200-1	Permanent	12/09/2015	

					Faisalabad				
Humaira Iram	Female	Pakistani	Lecturer	MS	Riphah International University	35202-8782291-6	Permanent	03/02/2015	
Nosheen Manzoor	Female	Pakistani	Lecturer	MS	Riphah International University	33100-7382270-2	Permanent	18/10/2014	
Haafizah Aamna Mudassir	Female	Pakistani	Lecturer	MBBS	King Edward Medical University Lahore	33100-2180770-4	Permanent	04/06/2015	
Bushra Haroon	Female	Pakistani	Lecturer	MS	Dominican College of Blauvelt New York	33100-0810291-8	Permanent	03/11/2016	
Tamjeed Ghaffar	Male	Pakistani	Lecturer	MS	Riphah International University	33301-2507352-7	Permanent	26/09/2017	



## **Annexure – I: Lab & Studios Safety Precautions**

### **Laboratory Staff**

Be calm and relaxed, while working in Lab.

No loose wires or metal pieces should be lying on table or near the circuit, to cause shorts and sparking.

Avoid using long wires, that may get in way while making adjustments or changing leads.

Keep high voltage parts and connections out of the way from accidental touching and from any contacts to test equipment or any parts, connected to other voltage levels.

BE AWARE of bracelets, rings, metal watch bands, and loose necklace (if you are wearing any of them), they conduct electricity and can cause burns. Do not wear them near an energized circuit.

Do not install any software on any computer without getting approval from the respective authorities.

Make sure all the computers and other equipment in the labs are switched off at the end of the day.

Do not unplug a computer or equipment without switching it off first.

### **Students**

Shut down the computers properly after finishing your work.

Do not install any software on any computer. If you are unable to find any required software, please contact the IT staff for help and support.

Do not switch off network printers and scanners. Do not damage any equipment in the lab.

Be considerate to other students while working in the labs.

## **Annexure –J**

### **AT Findings**

#### **Panel - Assessment Team**

Following Assessment Team Members Visited Department of Rehabilitation and Allied Health Sciences (RCR&AHS) on **12 March, 2019**

#### **Exit Meeting – 12 March, 2019**

Following attended the meeting:-

- **Brig (R) Maqsood ul Hassan**      **(Chairman AT)**
- **Engr. Salim Ahmed Khan**      **(Convener)**
- **Prof. Dr. Asghar Khan**      **Dean (FR&AHS)**
- **Dr. Muhammad Affan**      **Program Team/Incharge**
- **Engr. Fawad Sadiq**      **Member**


The Chairman AT presented his final recommendations to carry out the improvements in this program. The Respected Chairman approved the proceedings:

- a.      Lack of Extra Curricular Activities for students
- b.      Inadequate seating capacity in the class rooms
- c.      Training of Junior Faculty members
- d.      Overloaded Faculty Members

**Note:** After the above exit meeting, the Departmental head prepared the implementation plan with target dates and submitted it to the QEC. The QEC pursued the activities and then mentioned the final status completed/in progress in Annex-K before submitting the SAR to HEC

# Annexure K

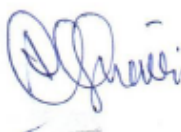
## Implementation Plan (In the light of Strong and Weak points of the program)

AT Finding	Corrective Action	Implementation Date	Responsible Body	Present Status
Less extracurricular activities (ECA) for students	Arrange extra-curricular activities (like inter-faculty sports) for students in coordination with Student Services Department	By 20 <sup>th</sup> May, 2019	HODs/Manager SSD	Sports events arranged. <b>Completed</b>
Training of Junior Faculty members	Faculty Members may enrolled in Postgraduate Diploma on Teaching Methodology	By 20 <sup>th</sup> May, 2019	Dean RCR&AHS Associate Dean Academics RCR&AHS	<b>Completed</b>
Inadequate seating capacity in Lecture hall 1 and Lecture hall 3	Add 50 chairs in Lecture Halls	By 20 April, 2019	Director Operations/Dean FR&AHS	<b>Completed</b>
Improvements required in guidance/advisory process for students	Update/Revise the guidance / career counseling Policy	By 20 April, 2019	HODs Boys Girls	<b>Completed</b>
Chairman's AT Comments Name and Signature	 Brig. (Retd.) Vice Principal (Dr. Maqsood ul Hassan) Islamic Int'l Medical College Rwp			
QEC Comments Name and Signature				
Dean's Comments Name and Signature				



**ASGHAR KHAN**  
Dean

RCR&AHS  
Riphah International University Islamabad



## **Annexure – L: Faculty Course Review Report**

Riphah College of Rehabilitation and Allied Health Sciences (RCR&AHS) is running different courses for the DPT program. All courses curriculum is reviewed periodically by the Board of Studies to assess its effectiveness and contribution in achieving program objectives. Course review also contributes towards making any changes in the syllabi.

PT members launched HEC Performa 2 (Faculty of Course Review Report) to all the faculty members, to obtain their feedback about courses.

The summary of the overall feedback of all courses identified the following improvement points:

- a. Improvement in course curriculum to emphasis on Leadership component.
- b. Provision of more technical/financial resources to execute final projects d.
- Improvement in learning the methodology of Market working,

Board of Studies scrutinized these points and presented in the Board of Faculty that will review and suggest the implementation as deemed necessary.

## Annexure – M: Rubric Report

Self Assessment Report					
Criterion 1 – Program Mission, Objectives and Outcomes			Weight = 0.05		
Factors	Score				
1. Does the program have document measurable objectives that support faculty/ college and institution mission statements?	5	4	3	2	1
2. Does the program have documented outcomes for graduating students?	5	4	3	2	1
3. Do these outcomes support the Program objectives?	5	4	3	2	1
4. Are the graduating students capable of performing these outcomes?	5	4	3	2	1
5. Does the department assess its overall performance periodically using quantifiable measures?	5	4	3	2	1
6. Is the result of the Program Assessment documented?	5	4	3	2	1
Total Encircled Value (TV)	19				
SCORE 1 (S1) = [TV/ (No. of Question * 5)] * 100 * 0.05	3.17				

Criterion 2– Curriculum Design and Organization		Weight = 0.20				
Factors	Score					
1. Is the curriculum consistent?	5	4	3	2	1	
2. Does the curriculum support the program’s documented objectives?	5	4	3	2	1	
3. Are the theoretical background, problem analysis and solution design stressed within the program’s core material?	5	4	3	2	1	
4. Does the curriculum satisfy the core requirements laid down by HEC?	5	4	3	2	1	
5. Does the curriculum satisfy the major requirements laid down by HEC?	5	4	3	2	1	
6. Does the curriculum satisfy the professional requirements as laid down by HEC?	5	4	3	2	1	
7. Is the information technology component integrated throughout the program?	5	4	3	2	1	
8. Are oral and written skills of the students developed and applied in the program?	5	4	3	2	1	
Total Encircled Value (TV)	38					
SCORE 1 (S1) = [TV/ (No. of Question * 5)] * 100 * 0.20	19					

Criterion 3– Laboratories and Computing Facilities		Weight = 0.10				
Factors	Score					
1. Are the laboratory manuals/ documentation/ instructions etc. for experiments available and readily accessible to faculty and students?	5	4	3	2	1	
2. Are there adequate number of support personnel for instruction and maintaining the laboratories?	5	4	3	2	1	
3. Are the University’s infrastructure and facilities adequate to support the program’s objectives?	5	4	3	2	1	
Total Encircled Value (TV)	15					
SCORE 1 (S1) = [TV/ (No. of Question * 5)] * 100 * 0.10	10					

Criterion 4– Student Support and Advising		Weight = 0.10				
Factors		Score				
1. Are the courses being offered in sufficient frequency and number for the students to complete the program in a timely manner?	5	4	3	2	1	
2. Are the courses in the major area structured to optimize interaction between the students, faculty and teaching assistants?	5	4	3	2	1	
3. Does the university provide academic advising on course decisions and career choices to all students?	5	4	3	2	1	
Total Encircled Value (TV)	12					
SCORE 1 (\$1) = [TV/ (No. of Question * 5)] * 100 * 0.10	8					

Criterion 5– Process Control		Weight = 0.15				
Factors	Score					
1. Is the process to enroll students to a program based on quantitative and qualitative criteria?	5	4	3	2	1	
2. Is the process above clearly documented and periodically evaluated to ensure that it is meeting its objectives?	5	4	3	2	1	
3. Is the process to register students in the program and monitoring their progress documented?	5	4	3	2	1	
4. Is the process above periodically evaluated to ensure that it is meeting its objectives?	5	4	3	2	1	
5. Is the process to recruit and retain faculty in place and documented?	5	4	3	2	1	
6. Are the process for faculty evaluation & promotion consistent with the institution mission?	5	4	3	2	1	
7. Are the process in 5 and 6 above periodically evaluated to ensure that they are meeting their objectives?	5	4	3	2	1	
8. Do the processes and procedures ensure that teaching and delivery of course material emphasize active learning and that course learning outcomes are met?	5	4	3	2	1	
9. Is the process in 8 above periodically evaluated to ensure that it is meeting its objectives?	5	4	3	2	1	
10. Is the process to ensure that graduates have completed the requirements of the program based on standards and documented procedures?	5	4	3	2	1	
11. Is the process in 10 above periodically evaluated to ensure that it is meeting its objectives?	5	4	3	2	1	
Total Encircled Value (TV)	51					
SCORE 1 (S1) = [TV/ (No. of Question * 5)] * 100 * 0.15	13.91					

Criterion 6– Faculty		Weight = 0.15				
Factors	Score					
1. Are there enough full time faculty members to provide adequate coverage of the program areas/courses with continuity and stability?	5	4	3	2	1	
2. Are the qualifications and interest of faculty members sufficient to teach all courses, plan, modifies and updates courses and curricula?	5	4	3	2	1	
3. Do the faculty members possess a level of competence that would be obtained through graduate work in the discipline?	5	4	3	2	1	

4. Do the majority of faculty members hold a Ph.D. degree in their discipline?	5	4	3	2	1
5. Do faculty members dedicate sufficient time to research to remain current in their disciplines?	5	4	3	2	1
6. Are there mechanisms in place for faculty development?	5	4	3	2	1
7. Are faculty members motivated and satisfied so as to excel in their profession?	5	4	3	2	1
Total Encircled Value (TV)	25				
SCORE 1 (S1) = [TV/ (No. of Question * 5)] * 100 * 0.15	10.71				

Criterion 7– Institutional Facilities		Weight = 0.15				
Factors	Score					
1. Does the institution have the infrastructure to support new trends such as e-learning?	5	4	3	2	1	
2. Does the library contain technical collection relevant to the program and is it adequate staffed?	5	4	3	2	1	
3. Are the class rooms and offices adequately equipped and capable of helping faculty carry out their responsibilities?	5	4	3	2	1	
Total Encircled Value (TV)	15					
SCORE 1 (S1) = [TV/ (No. of Question * 5)] * 100 * 0.15	15					

Criterion 8– Institutional Support		Weight = 0.10				
Factors	Score					
1. Is there sufficient support and finances to attract and retain high quality faculty?	5	4	3	2	1	
2. Are there an adequate number of high quality graduate students, teaching assistants and Ph.D. students?	5	4	3	2	1	
Total Encircled Value (TV)	8					
SCORE 1 (S1) = [TV/ (No. of Question * 5)] * 100 * 0.10	8					

Overall Assessment Score = S1+S2+S3+S4+S5+S6+S7+S8

$$= 3.17+19+10+8+13.91+10.71+15+8$$

$$= 87.79$$

