



# **UET Taxila**

# **Annual Report**

# **2013-14**

## CONTENTS

<b>S. No.</b>	<b>Description</b>	<b>Page No.</b>
1.	Vice Chancellor's Message	01
2.	Executive Summary	02
3.	About the University	04
<b>Chapter-1</b>	<b>Academic Activities</b>	<b>09</b>
1.1	Undergraduate and Postgraduate Programmes	
1.2	MS and PhD Programmes	
1.3	Academic Achievements	
1.4	Foreign Academic Linkages	
1.5	Honours and Awards	
1.6	Institutional Linkages	
<b>Chapter-2</b>	<b>Research and Development</b>	
2.1	R&D-An Overview	
2.2	Projects:	
2.2.1	Completed	
2.2.2	Newly Launched	
2.3	Publications	
2.4	Conferences, Seminars and Workshops, etc	
2.5	Research Journals	
2.6	Research Collaboration	
2.6.1	Indigenous	
2.6.2	Foreign Linkages	
2.6.3	Funding Grants for R&D	
2.6.4	Operation of Office of Research, Innovation and Commercialization (ORIC)	
<b>Chapter-3</b>	<b>Quality Assurance</b>	
3.1	Impact of Quality Assurance in the University	
3.2	Quality Enhancement Cell	
3.3	Membership of Associations/Networks	
3.4	Accreditation of Programs from relevant Councils	
<b>Chapter-4</b>	<b>Faculty Development</b>	
4.1	Faculty Development Programs (MS/PhD Local + Foreign)	
4.2	Retuned Scholars	
4.3	Present Scholars	
4.4	Pre-Service and In-Service Professional Development Programs	
4.5	Achievements of Foreign Faculty	

<b>Chapter-5</b>	<b>Access</b>
5.1	Basic Enrolment
5.2	Equity
5.3	Gender-wise Detail
5.4	Employability
5.5	Faculty-Students Ratio
<b>Chapter-6</b>	<b>Universities Building Economies</b>
6.1	New Initiatives
6.2	Technology Incubation Centre
6.3	Patents
6.4	Internship and Placement Office
6.5	Student Counseling and Career Guidance
<b>Chapter-7</b>	<b>Strengthening Physical Infrastructure</b>
7.1	Development Projects (Laboratories, Libraries, etc)
7.2	Research Equipment
7.3	Construction Projects
<b>Chapter-8</b>	<b>Strengthening Technological Infrastructure</b>
8.1	Digital Library
8.2	PERN
8.3	Video Conferencing
8.4	Campus Management Solution
8.5	Web Portal
8.6	Development of online Admission System
<b>Chapter-9</b>	<b>Universities Building Communities</b>
9.1	University-Community Interaction
9.2	University's Role in Building Community
9.3	Alumni Affairs: Outstanding Achievements etc
<b>Chapter-10</b>	<b>Sports</b>
10.1	Inter-departmental Sports
10.2	Participation in National Championships
10.3	Achievements at National Level
10.4	Incentives and Honors/Awards for Sports persons
<b>Chapter-11</b>	<b>Universities Building Leadership</b>
11.1	Faculty Leadership (Awards and representation in Govt policy making Committees, Memberships on various Councils etc.)
11.2	Student Leadership (Co-Curricular Activities: University Dramas, Exhibitions, Expos, Competitions, Debates at National and International Levels)

**Chapter-12 Finance**

- 12.1 Annual Statement of Accounts
- 12.2 Financial Year at a Glance
- 12.3 Audit Report
- 12.4 Development Budget
- 12.5 Recurring Budget
- 12.6 Self-generated Income
- 12.7 SAP related Activities
- 12.8 Trend of per Student spending

**Chapter-13 University Governance**

- 13.1 Syndicate meetings
- 13.2 Academic Council meetings
- 13.3 Board of Advanced, Studies meetings

**Chapter-14 Office of Resource Generation/Development**

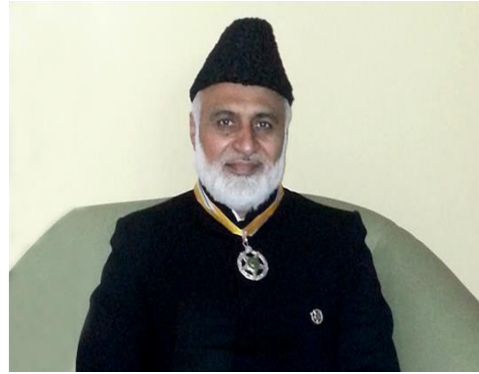
- 14.1 Initiatives and Implementation
- 14.2 Future Plans

**Chapter-15 Health Centre/Medical Facilities**

- 15.1 Medical Facilities available
- 15.2 Counseling for Stress reduction

## VICE CHANCELLOR'S MESSAGE

Human civilization, as we understand, has gone through different epochs. Consequently economies of different epochs have got different forms: from hunting and gathering to agrarian economy, to industrial economy, and finally to the knowledge society and economy of our day. In knowledge based economy, the capacity to



create wealth and make progress depends mainly upon the type and amount of knowledge and the number of knowledgeable people a country or society has. We are currently witnessing the emergence of knowledge economy in Pakistan. The role of higher education and higher education institutions is thus pivotal for promotion and sustenance of knowledge economy. We, at UET Taxila, not only realize our role, but are also committed to serve the society and economy by creating and imparting cutting edge knowledge in the field of engineering & technology. I strongly believe that Higher Education is a public good. It means that nobody should be excluded from its access and increasing access to higher education will not diminish its benefits to others. With this vision of Higher Education, we have adopted a student centric approach and have set clear goals.

First, we want to increase access to Higher Education. Pakistan has only 8.6% access rate to higher education. In order to increase the access to Higher Education, we have been trying for last one decade not only to increase the enrollment in our existing departments, but have also started new programs and opened a sub-campus in Chakwal. Our second sub-campus will be soon established in Pind Daden Khan. Currently, we have more than 5000 students body, which was only 1000 in year 2000. Our new campuses are creating equal opportunity for the students of less developed areas and will thus reduce the class stratification in society.

Second, it is pertinent to mention here that for increasing enrolment, we never ever compromise merit. We recruit *Best & Brightest* students and ensure to provide them a quality learning environment. We have heavily invested to establish new and state of the art labs, new class rooms, new building, fast and reliable internet access throughout the campus, new cafeterias and hostels, and a huge collection of books in the library. We have a fleet of 23 buses to provide transportation facility to the

students living in the twin cities of Rawalpindi and Islamabad and of surrounding areas.

UET Taxila is not a for-profit organization. We meet approximately only 20 % of our annual expenses through tuition fees. For the rest of our expenses, both provincial and federal governments are generously supporting us. Over and above, we offer generous merit and need based financial assistance. Last year 18% of our students received some form of financial assistance.

I consider engineering as combination of science, art, and craft. Science part is covered in class rooms by a competent faculty; 25 % of our faculty has PhD degrees. To develop the art of engineering, we frequently invite industry experts to deliver lectures to our students. These practitioners are called as industry professors and industry aces. We are also making linkages with industry and trying to fully capitalize the industrial hubs of Taxila and Hattar. To learn the craft part of engineering, we encourage and facilitate our students to get internship in industry. We have established dedicated Placement and Alumni Offices for helping students in finding jobs and internships. Our faculty is involved in joint projects with industry and making contribution in solving problems of local industry. In sum, we can claim that the education we are imparting is relevant to the needs of our industry, country, and society. We have recently added new courses of social sciences to make the soul and character of our students, to make them socially and politically responsible and active citizens.

In sum, we are imparting education in diverse disciplines of engineering and technology, which has high quality, affordable, relevant for student, industry and society.

**Prof. Engr. Niaz Ahmad Akhtar (SI)**  
**PhD**

## EXECUTIVE SUMMARY

This report consisted on Fifteen Chapters and annexures as per requirement of the content.

Chapter 01 encompasses academic activities of the university, it included the Undergraduate and Postgraduate Programmes, MS and PhD Programmes, Academic Achievements of faculty, Foreign Academic Linkages and Honours and Awards of the faculty members.

Chapter 02 is about research and development activities, it includes research projects, publications, workshops, seminars and conferences. It also elucidates the local and foreign linkages of the University for Research Collaboration, funding grants provided to the faculty members for research and development and the purpose of the office of Research Innovation and Commercialization.

Chapter 03 is about impact of quality assurance on the performance of the university and activities of the Quality Enhancement Cell of UET Taxila.

Chapter 04 is about faculty development opportunities regarding higher qualification and workshops returned scholars and present scholars.

Chapter 05 is about enrolment of students and their employability potential. It also explains the ratio of faculty to students.

Chapter 06 is about economy- building techniques employed by the university such as departmental collaboration with various national and international organizations; new initiatives and the opportunities/ facilities provided by the university placement office such as internship and career guidance.

Chapter 07 explains physical infrastructure development activities undertaken by the university such as construction and development projects.

Chapter 08 explains technological infrastructure strengthening activities of the university such as library, PERN, video conferencing and web portal.

Chapter 09 is about community building techniques of the university such as community work opportunities for students and outstanding achievements of university outstanding alumni.

Chapter 10 is about sports activities interdepartmental competitions, national level competitions and university's achievements in these competitions.

Chapter 11 is about faculty leadership i.e. membership of various national and international councils; and student leadership i.e. achievement in co-curricular activities.

Chapter 12 explains the finance of the university such as audit report budget report and trend of expenditure.

Chapter 13 gives details of university governance meetings: Syndicate Meetings, Academic Council meetings and board of advanced studies meetings.

Chapter 14 gives details of the office of resource generation and development, its initiatives plans and their implementation.

Chapter 15 elucidates the facilities of the university clinic and health related services



## ABOUT THE UNIVESITY

The University of Engineering and Technology (UET), Taxila is located in the ancient city of Taxila, about 35 km north-west of the capital city of Islamabad on the main Rawalpindi-Peshawar highway. It is located near the historical site of Julian University, an ancient Buddhist University. UET Taxila was established in 1975 as a campus of University of Engineering and Technology, Lahore and had been chartered as an independent university in 1993. University has its one sub campus at Chakwal, 90 km south-east of the Federal capital functional since 2005.



It is a state own university. The Governor of the Punjab is the Chancellor and the Education Minister of the Punjab is the Pro-Chancellor of the University. The Syndicate is the governing/legislative body and the Academic Council is the highest academic body of the University. The Vice Chancellor is the Chief Executive and Academic Officer of the University. He is assisted by Deans of Faculties, Chairman of Departments, Directors and



Principal Officers of the University – the Registrar, the Treasurer, the Controller of Examinations and the Project Director, to ensure that the provisions of the University Act, the Statutes and the Regulations are faithfully observed and implemented.

The following institutions are affiliated with the University for the Award of the degrees.

- Center for Advanced Studies in Engineering (CASE), Islamabad
- Khan Institute of Computer Sciences and I.T. (KISCIT), Rawalpindi
- HITEC University, Taxila Cantt
- Wah Engineering College, Wah Cantt
- SS-CARE School of Engineering (SCSE)
- Swedish College of Engineering and Technology (Wah Cantt. Campus)
- Army Public College of Management and Sciences (APCOMS)



*Pictorial view of various departments of University of Engineering and Technology, Taxila*

## **CHAPTER 1            ACADEMIC ACTIVITIES**

### **1.1    Undergraduate Programs**

The University commenced its academic journey from the undergraduate degree programs in three disciplines, Civil Engineering, Electrical Engineering and Mechanical Engineering in 1978. Presently, the University offers undergraduate degrees in the following 09 engineering disciplines. Bachelor degree is of 8 semesters completed in 4 years.

- 1) Civil Engineering (Taxila Campus)
- 2) Computer Engineering (Taxila Campus)
- 3) Electrical Engineering (Taxila Campus)
- 4) Electronics Engineering (Taxila and Chakwal Campus)
- 5) Environmental Engineering (Taxila Campus)
- 6) Mechanical Engineering (Taxila Campus)
- 7) Mechatronics Engineering (Chakwal Campus)
- 8) Software Engineering (Taxila Campus)
- 9) Telecommunication Engineering (Taxila Campus)

### **1.2    Master and Ph.D. Programmes**

The University offers master degrees in the following 8 engineering disciplines at Taxila Campus. Master degree is of 4 semesters that completes in 2 years.

Part Time Program M.Sc /P.hD

- 1) Civil Engineering
- 2) Computer Engineering
- 3) Electrical Engineering
- 4) Electronics Engineering
- 5) Engineering Management
- 6) Mechanical Engineering
- 7) Software Engineering
- 8) Telecommunication Engineering

The University offers Ph.D. degrees in the following disciplines at Taxila Campus:

- 1) Civil Engineering
- 2) Computer Engineering
- 3) Electrical Engineering
- 4) Engineering Management
- 5) Mechanical Engineering
- 6) Software Engineering
- 7) Telecommunication Engineering

### 1.3 Academic Achievements

The University of Engineering & Technology, Taxila is actively engaged in the dissemination of Engineering knowledge and producing Engineers to cater for the national needs. In order to meet the increasing demand for skilled manpower in the relevant fields, the University has been taking all the necessary measures in adopting the new knowledge and teaching techniques.

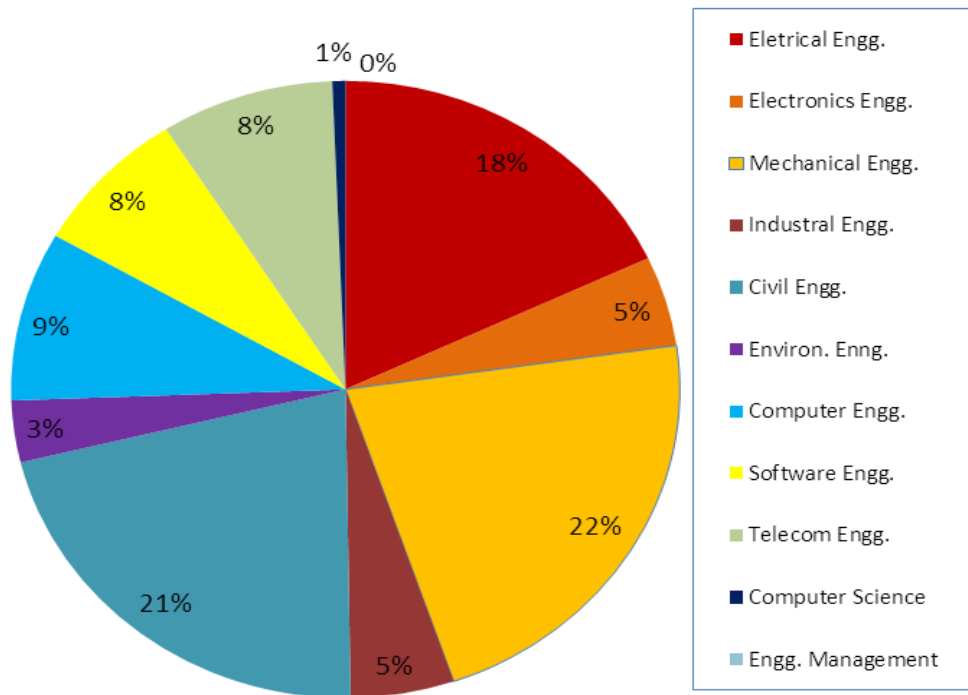
The University offers the full time four years Undergraduate Courses leading to the degree of B.Sc. Engineering in the relevant field. It also conducts full time/ part time Postgraduate Course leading to a degree of M.Sc. and Ph.D. in the emerging fields of Engineering.

The existing student strength in various degree programs in different teaching departments in the University is given below:

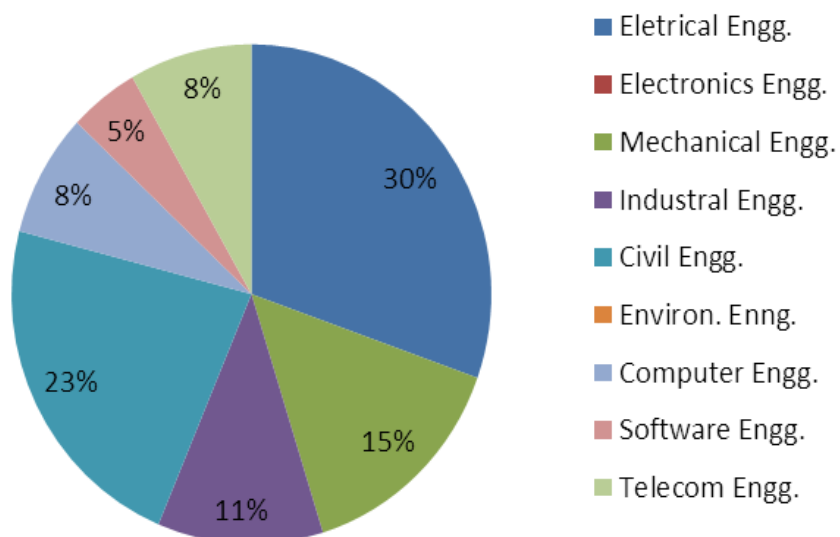
*Table 1.1: Student strength in various degree programs at different departments*

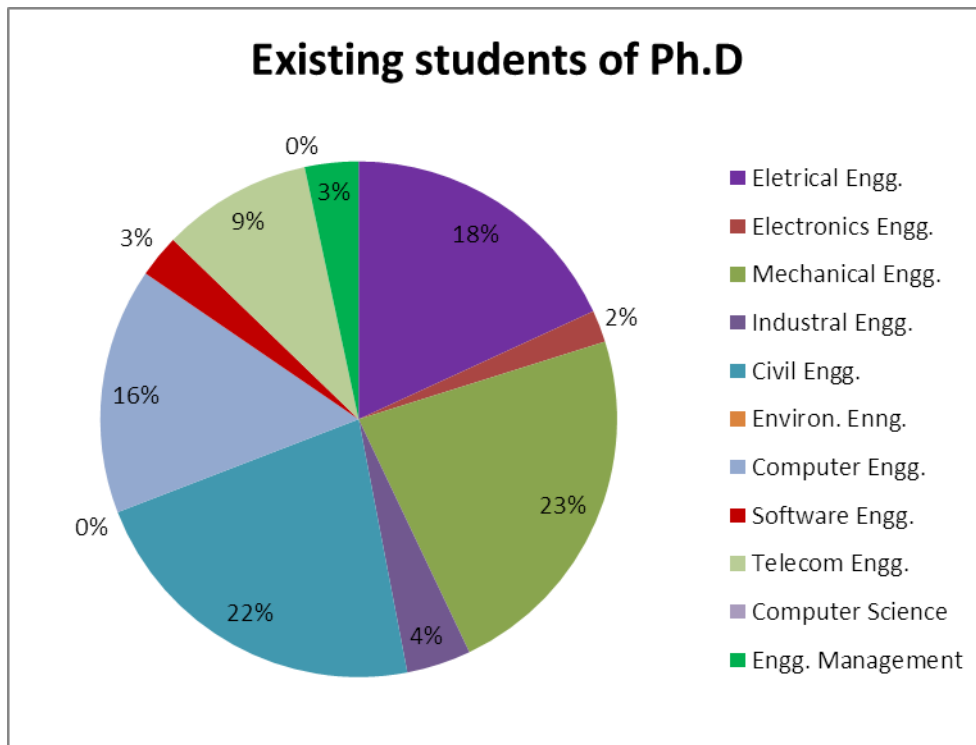
	Male	Femal	Total	Male	Femal	Total	Male	Femal	Total	Total
<b>Taxila Campus</b>										
Eletrical Engg.	601	128	729	221	23	244	27	2	29	1002
Electronics Engg.	157	38	195	0	0	0	3	0	3	198
Mechanical Engg.	735	23	758	107	13	120	34	3	37	915
Industrual Engg.	167	9	176	81	9	90	6	0	6	272
Civil Engg.	715	28	743	165	15	180	33	0	33	956
Environ. Engg.	108	40	148	0	0	0	0	0	0	148
Computer Engg.	296	86	382	58	32	90	23	6	29	501
Software Engg.	256	111	367	34	30	64	4	6	10	441
Telecom Engg.	280	86	366	60	16	76	14	2	16	458
Computer Science	21	16	37			0	0	0	0	37
Metallurgy and Materials Engineering				22	2	24				
Maths						0				
Physics						0				
Engg. Management	0	0	0				5	2	7	7
<b>Sub-Total</b>	<b>3336</b>	<b>565</b>	<b>3901</b>	<b>726</b>	<b>138</b>	<b>864</b>	<b>149</b>	<b>21</b>	<b>170</b>	<b>4935</b>
<b>Chakwal Campus</b>										
Electronics Engg.	155	12	167	0	0	0	0	0	0	167
Mechatronics Engg.	166	8	174	0	0	0	0	0	0	174

### Chart Title

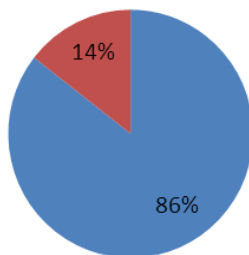


### Existing students of Master Program

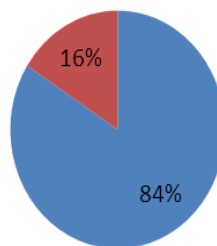




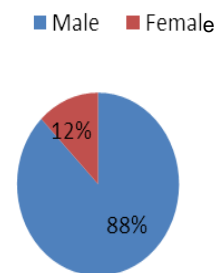
**Male/Female students Ratio in BS Degree Program**  
 ■ Male ■ Female



**Male/Female Students ratio in Master degree program**  
 ■ Male ■ Female



**Existing students of Ph.D Program**  
 ■ Male ■ Female



In the existing student strength, the major portion is that of undergraduate students comprising of about 80% of the total strength. Three oldest engineering programs, i.e. Civil Mechanical and Electrical have the highest number of undergraduate students (in total 2230, 57% of total undergraduate students). The university has good number of students in postgraduate degree programs, Master and Doctoral. Presently 170 students are taking up doctoral studies in the university.

During the reporting year, the number of students admitted in each department for the academic session of 2014 is given below:

Table 1.2: Student admitted during the academic session 2014.

Teaching Department	Student Intake in Session 2014			
	Bachelor	Master	Doctoral	Total
<b>Taxila Campus</b>				
Electrical Engg.	198	65	10	273
Electronics Engg.	46	22	3	71
Mechanical Engg.	204	57	14	275
Industrial Engg.	55	26	3	84
Civil Engg.	204	35	7	246
Environmental Engg.	40	17	0	57
Computer Engg.	102	45	6	153
Software Engg.	89	25	3	117
Telecom & Inform. Engg.	107	25	8	140
Engineering Management	0	30	0	30
Computer Science	37	21	0	58
Material Engineering	0	24	0	24
Applied Physics	0	15	0	15
MS in Math	0	15	0	15
<b>Sub-Total</b>	<b>1082</b>	<b>422</b>	<b>54</b>	<b>1558</b>
<b>Chakwal Campus</b>				
Electronics	46	0	0	46
Mechatronics	53	0	0	53
<b>Sub-Total</b>	<b>99</b>	<b>0</b>	<b>0</b>	<b>99</b>
<b>Total</b>	<b>1181</b>	<b>422</b>	<b>54</b>	<b>1657</b>

A comparison of the intake of students in last three years in different degree programs shows that the total number of students decreases in the subsequent years. The possible explanation of this declining trend is the drop out after securing admission in other competitive institutions. At the same time, there is increasing trend to get admission in Master and Doctoral programs as depicted in the tables below.

Table 1.3: Comparison of undergraduate intake during the last three academic sessions.

Teaching Department	Session 2012	Session 2013	Session 2014
Electrical Engg.	174	180	198
Electronics Enng.	42	45	46
Mechanical Engg.	181	188	204
Industrial Engg.	39	43	55
Civil Engg.	179	182	204
Environmental Engg.	33	30	40
Computer Engg.	82	89	102
Software Engg.	83	84	89
Telecom. & Inform Engg.	74	78	107
Computer Science	0	0	37
Electronic (Chkwl)	38	36	46
Mechatronic (Chkwl)	42	38	53
<b>Total</b>	<b>967</b>	<b>993</b>	<b>1181</b>

Table 1.4: Comparison of M.Sc. intake during the last three academic sessions.

Teaching Department	Session 2012	Session 2013	Session 2014
Electrical Engg.	109	93	65
Mechanical Engg.	35	47	57
Industrial Engg.	40	34	56
Civil Engg.	69	90	35
Computer Engg.	45	35	45
Software Engg.	22	25	25
Telecom. Engg.	27	23	25
Electronics Engg.	-	-	22
Energy Engg.	-	-	17
Material Engg.	-	-	24
MS Applied Phy.	-	-	15
MS Math	-	-	15
MS Comp. Science	-	-	21
<b>Total</b>	<b>347</b>	<b>347</b>	<b>422</b>



Table 1.5: Comparison of student intake in doctoral program during the last three academic sessions.

Department	Session 2012	Session 2013	Session 2014
Electrical Engg.	3	12	10
Mechanical Engg.	1	2	14
Industrial Engg.	0	3	3
Civil Engg.	6	8	7
Computer Engg.	5	4	6
Software Engg.	0	7	3
Telecom. Engg.	2	4	8
Electronic Engg.	0	0	3
Engg. Mgmt	0	7	
<b>Total</b>	<b>17</b>	<b>47</b>	<b>54</b>

### 1.3 Foreign Academic Linkages

#### (a) Academic Linkages of Faculty of Civil Engineering, UET Taxila.

The collaboration with foreign Universities for joint research, training, faculty/student exchanges and holding seminars is adequately established. The educational program of the department meets the world standards. MOUs with the following organizations have been signed:

Sr. No.	Type of Agreement	University / Organization	Year
1	Memorandum of Understanding	EISEP, JAPAN	Jan-08
2	Memorandum of Understanding	The Queen's University of Belfast	June-08
3	Memorandum of Understanding	University of Hasselt, Belgium	Nov-12
4	Memorandum of Understanding	Aalborg University, Denmark	Sep-12

#### (b) Academic Linkages between Faculty of Engineering and Science, Aalborg University Denmark and University of Engineering & Technology, Taxila, Pakistan

On 6<sup>th</sup> September 2012, University of Engineering and Technology signed an MOU with Faculty of Engineering and Sciences, Aalborg University, Denmark to provide a framework within which collaborative activities and projects will be undertaken and specific program areas. The purpose and framework of MOU is to:

- (i) Promote research collaboration (joint projects) and hi-tech paper publication
- (ii) Exchange of faculty members
- (iii) Exchange of students
- (iv) Exchange and development of new teaching methods including access to online courses for students.

The linkages with the following institutions are under negotiation.

- (i) The University of Liverpool, UK
- (ii) The University of Nottingham, UK
- (iii) Warsaw University of Technology, Poland
- (iv) Universities in the German State of Rheinland-Pfalz

#### 1.4 Honors and Awards

Prof. Dr. Shahab Khushnood of Mechanical Engineering Department was awarded Best Teacher Award by HEC during 2013.

#### 1.5 Institutional Linkages

The department of Civil Engineering has active collaboration with the following institutions:

##### **(a) MOU signed between University of Wah and University of Engineering and Technology, Taxila**

University of Engineering and Technology, Taxila has signed an MOU with University of Wah on 25<sup>th</sup> April 2011 in the following potential area of collaboration;

- (i) Faculty Collaboration for academic and research undertakings
- (ii) Faculty members/researchers of UET, Taxila to serve on University of Wah research projects and vice versa, and
- (iii) Mutually agreed professional collaborations.

##### **(b) MOU signed between National Institute of Vacuum Science and Technology (NINVAST), Islamabad and University of Engineering and Technology, Taxila**

University of Engineering and Technology, Taxila has signed an MOU with National Institute of Vacuum Science and Technology (NINVAST), Islamabad on 23<sup>rd</sup> December 2010 for technical collaboration to;

- (i) In a course on the subject of Vacuum Science and Technology at master and undergraduate level
- (ii) Supervision of M.Sc. thesis research and faculty exchange programme
- (iii) Undergraduate projects in Vacuum Science and Technology
- (iv) Use of lab facilities for Ph.D. research purpose
- (v) Joint conference on topics of mutual interest
- (vi) Internship

(vii) Joint publications, etc.

**(c) MOU signed between Pakistan Telecommunication Authority (PTA) and University of Engineering and Technology, Taxila**

University of Engineering and Technology, Taxila has signed an MOU with Pakistan Telecommunication Authority (PTA) for technical collaboration to;

- (i) Extend cooperation in technology/business research and sharing of resources for the uplift of business activities inside the country
- (ii) Cooperation with PTA on different national and international issues related to trade, business and economy of the country
- (iii) Initiate measures in collaboration with PTA for the promotion of technical, social and business norms in the region
- (iv) Provide assistance in the identification of research projects
- (v) Provide assistance to students as and when required including data, professional expertise and access to library, etc.

(d) C&W, Pakistan

(e) Bestway Cement, Pakistan

(f) NESPAK, Pakistan

- 1. Fachhochschule Dusseldorf (FHD), University of Applied Sciences, Germany
- 2. Alexandria University, Egypt

Under the strong UET HIT research collaboration, Mechanical Engineering Department has admitted five PhD/MSc Scholars nominated by HIT. The research facilities in the HIT are accessible to our students also.

## CHAPTER 2 RESEARCH AND DEVELOPMENT

### 2.1 An Overview of R&D

In order to satisfy the increasing demand for relevant advanced technological education, the department offers MSc degree courses in Structural Engineering, Water Resources & Hydraulics Engineering, Transportation Engineering and Geotechnical Engineering, covering the most recent developments. The courses contain a balance of analytical and professional aspects and are designed to suit the needs of fresh graduates and those with professional experience. The tremendous potential for the development of water resources requires the services of engineers trained to plan, design, construct, operate and maintain engineering works for the control and utilization of these resources. Most of the postgraduate students belong to the construction industry and act as a bridge for university industry linkage that makes research in the department to be practical and useful for the country. The introduction of PhD program has further enriched the research activities in the department.

The activities and steps taken by university for research and development will improve the quality and number of research activities. The university has established linkages with industry and public sector organizations like NESCOM and National Highway Authority to boost research in various fields. The University has planned joint research projects with industry like Heavy Mechanical Complex (HMC), Air Weapon Complex (AWC), PMO, POF, HIT and alike.

### 2.2 Projects:

#### 2.2.1 Completed Projects

##### Postgraduate Faculty Research Projects

24 projects have been completed successfully in 2013-14.

The major portion of university research funds goes to postgraduate research for thesis work. The detail of faculty research projects are given below:

SN	Researchers	Project Title	Cost (Rs)	Duration (months)
<b>Civil Engineering</b>				
1.	Prof. Dr. Saeed Ahmad & Engr Zaheer Ahsan	Investigation of Various Factors Affecting the Shear Strength of Dapped Ended Beams	625,000	12
2.	Prof. Dr. Saeed Ahmad & Engr.M. Arslan Yaqub	Investigation of Shear Behavior of Pile Cps Strengthened with Carbon Fiber Reinforced Polymers(CFRP)	1,010,000	12
3.	Prof. Dr. Saeed Ahmad & Engr. Faisal Ali Khan	Durability of High Performance Concrete with Supplementary Cementitious Materials	73,000	18

SN	Researchers	Project Title	Cost (Rs)	Duration
----	-------------	---------------	-----------	----------

SN	Researchers	Project Title	Cost (Rs)	Duration (months)
				(months)
4.	Prof. Dr. Saeed Ahmad & Engr. Muhammad Hasnain	Effects of Size of Beams on Shear Strength of High Strength Concrete Deep Beams	82,000	06
5.	Prof. Dr. Saeed Ahmad & Engr. Arsalan Babrus	Effects of Dolomite Powder on the Properties of Self-Compacting Concrete	60,000	06
6.	Dr. Qaiser uz Zaman Khan & Engr. Fiaz Tahir	Study of Energy Dissipation Capacity of Strip Confined RCC Bridge Columns Under Seismic Demand	1,101,500	12
7.	Prof. Dr. Mumtaz Ahmad Kamal, Dr. Naveed Ahmad & Engr. Muhammad Hussain,	Improving the Performance of Flexible Pavements through Bitumen-Aggregate Adhesion and Moisture Sensitivity Prediction	5,000,000	12
Sub-Total for Civil Engineering			7,951,500	
<b>Mechanical Engineering</b>				
1.	Prof. Dr. Shahab Khushnood & Engr. Sadaf Siddiq	Modeling & Simulation for Optimal Performance Analysis & Sensitivity Studies of A Solar Thermal Energy Storage Plant Based on Liquid Ammonia	220,000	12
2.	Dr. Riffat Asim Pasha & Miss. Ambreen Tajammal	Measurement of Cutting Tool Vibration Using Piezoelectric Ceramic	180,000	18
3.	Engr. Muhammad Ali Nasir & M. Ilyas Farooqi,	Design & Development of a Novel Composite Structural Monitoring System Based on Piezoresistive Sensors	286,875	12
4.	Dr. Muhammad Shehryar & Aneela Anum	Analysis of Gas Flow in Micro-thruster Nozzles.	650,000	6
5.	Dr. Sayyid Masood-ur-Rehman Shah & Inam-ul-Haq	Design & Fabrication of Rubber Wheel/sand Testing Machine	150,000	12
6.	Dr. Hafiz Muhammad Ali, & M. Anser Bashir	Investigation of Performance of solar cells in laboratory and outdoor conditions	175,000	12
7.	Engr. Waqar Qureshi,	Electronic Variable Valve Timing of IC Engine	101,500	06
8.	Dr. Shahab Khushnood, & Shahid Ahmad	An Experimental Analysis of Vibrations on Human Body (Specially Skull)	100,000	06

9.	Dr. Sayyid Masood-ur-Rahman Shah & Mifrah Ali	Fatigue Crack Propagation and Impact Testing of Welded Tool Steel	385,000	12
10.	Dr. Sayyid Masood-ur-Rahman Shah & Samra Arooj	Effect of Electric Discharge Machining parameters on the surface roughness of Aluminum cylinders and its effect on the fatigue life	276,000	12
11.	Dr. Hafiz Muhammad Ali	Investigation of Retention Angle on Enhanced Three Dimensional Tubes	215,000	18-24
Sub-Total for Mechanical Engineering			2,839,375	
<b>Electrical Engineering</b>				
1.	Prof. Dr. Mohammad Ahmad Chodhary Engr. Muhammad Ali Mehmood, 11- -MSc-EE-111	Performance Evaluation of Low Cost Thermoplastic Materials in the outdoor Environment of Pakistan	2,81,500/-	12
Sub-Total for Electrical Engineering			1,103,000	
<b>Computer Engineering</b>				
1.	Prof. Dr. Muhammad Zafrullah & Muhammad Nadeem Majeed,	Delay and Packet Loss Optimized Vertical and Horizontal Hand of Algorithms for VANETs	185,000	12
2.	Dr. Syed M. Anwar & Dr. Muhammad Majid	Brain Computer Interface (BCI) for Smart Phones.	385,000	12
3.	Dr. Muhammad Majid, Dr. S.Muhammad Anwar & Engr. Malik Aamir Arslan	Automatic Summarization of Personalized Video based on Kinect	2,75,000	12
Sub-Total for Computer Engineering			845,000	
<b>Engineering Management</b>				
1.	Prof.Dr.Muhammad Abbas Ch. (VC)	Management Concepts and Case Engineering Management Perspective in Pakistan Context.	4,094,000	12
Sub-Total for Engineering Management			4,094,000	
<b>Software Engineering</b>				
1.	Engr Ali Javed	An Automated Traffic Congestion and Evasion	66,250/-	12
	Engr Ali Javed	Mobi Blind Signaling	43,750	12
2.	Dr.Khalid Bashir Bajwa & Mirza Ahsan	Fabric Analyzer using Computer Vision Techniques	140,000	6
3.	Dr.Khalid Bashir Bajwa & Mirza Nauman Baig	Traffic Monitoring System	150,000	6
Sub-Total for Software Engineering			290,000	
Total for Postgraduate Research			<b>17,122,875</b>	

## 2.2.2 On-going Projects

Following research project has been approved by board of advance studies research & technological development from faculty research grant in the year 2015-2016.

### **FACULTY RESEARCH GRANT RECOMMENDED BY THE RESEARCH GRANT REGULATING COMMITTEE ON 5.3.2015 FOR THE FINANCIAL YEAR 2015-16**

#### a) Postgraduate Faculty Research Projects (Civil) Rs. 15,41,000/-

S #	Name of Principal Investigator/ Co-Investigator	Project title	Approved Amount (Rs)	Duration	Submission 1st & Final Progress Report	Approved Amount & Remarks
1.	Prof. Dr. Liaqat Ali Qureshi Syed Shujat ul Hassan Gillani 13-PT-MSc-Str-06 MSc Part Time Student	Experimental Investigation on Effect of Single Walled Carbon Nanotubes on the Behavior of Concrete	3,93,000/-	12 Months	30.6.15 28.2.16	Financial year 2015-16)
2.	Prof. Dr. Liaqat Ali Qureshi Israr Ahmad 13-PT-MSc-Str-05 MSc Part Time Student	Application of Multi-Walled Carbon Nanotubes in Civil Engineering	3,98,000/- -	12 Months	30.6.15 28.2.16	Financial year 2015-16)
3.	Dr. Fiaz Tahir Sidra Mobeen	Effect of Opening on Behaviour of RC Column	2,68,000/-	07 Months	30.8.15	Financial year 2015-16)
4.	Dr. Qaiser uz Zaman Khan Ali Rehan Saleem 13-PT-MSc-Str-09	Investigation Of Structural Behavior Of Hybrid Concrete Material In Beam Column Joints	4,82,000/-	06 Months	30.8.15	Financial year 2015-16)
					<b>Total amount 2014-15</b>	<b>Rs. 15,41,000/-</b>
<b>Total requested Amount: : Rs. 28,88,000/-</b>						

#### b) Postgraduate Faculty Research Projects (Materials & Metallurgy) Rs. 9,19,000/-

S#	Name of Principal Investigator/ Co-Investigator	Project title	Approved Amount (Rs)	Duration	Submission 1st & Final Progress Report	Approved Amount & Remarks
1.	Dr. Riffat Asim Pasha Kamran Ghafoor 14-FT-MSc-MMED-04 MSc Full Time Student	Evaluation of Electrochemical Behavior and Mechanical Properties of TIG Welded Al-Cu Alloy Plate by Different Welding Parameters.	4,49,000/-	12 Months	30.6.15 30-3-16	Financial year 2015-16
2.	Dr. Riffat Asim Pasha M. Zulkarnain Abbas 14-FT-MSc-MMED-01 MSc Full Time Student	Power Harvesting from Vibration using Piezoelectric Materials	4,70,000/-	12 Months	30.6.15 30-3-16	Financial year 2015-16

**Total: Rs. 9,19,000/-**

**c) Postgraduate Faculty Research Projects (Mechanical) Rs. 73,60,775/-**

1.	Dr. Hafiz Muhammad Ali Anam Dadeem MSc Full Time Student	Heat Transfer Enhancement through Nanofluids	8,00,000/-	18-24 months	<b>30.6.15</b> <b>28.2.17</b>	Financial year 2015-16
2.	Engr. Muhammad Ali Nasir Dr. Syed Masood Shah 2.Tehreem un Nisa 14-MS-FT-AMD-08	Design and Development of Graphene Nanoplatelets based Flexible Strain Gauges for Structural Health Monitoring of Composites	7,67,000/-	18 months	<b>30.6.15</b> <b>30.8.16</b>	Financial year 2015-16
3.	Dr. Muzaffar Ali Dr. Hafiz M. Ali	Experimental Performance Investigation of a Solar Assisted Hybrid (Solar & Waste Heat) Absorption Chiller for Air conditioning	11,55,000/- -	24 months	<b>30.6.15</b> <b>28.2.17</b>	Financial year 2015-16
4.	Engr. Faisal Qayyum 1.Dr. Sayyid Masoodur Rehman Shah 2.Faritha Mukhtar 14-MS-FT-AMD-05	Numerical Simulation and Verification of Thermal Fatigue Life of Hot rolling Mill.	6,67,400/-	12 months	<b>30.6.15</b> <b>28.2.16</b>	Financial year 2015-16
5.	Dr. Sayyid Masoodur Rehman Shah, 1.Engr. Faisal Qayyum 2.Muhammad Kamran 14-MS-FT-AMD-10	Determination of Anisotropic behavior during sheet hydro forming in deep drawing applications	6,48,000/-	12 months	<b>30.6.15</b> <b>28.2.16</b>	Financial year 2015-16
6.	Dr. Muzaffar Ali 1.Dr. Hafiz M. Ali	Performance Investigation of Maisotsenko-Cycle (M-Cycle) Using Different Configurations of Heat and Mass Exchanger	5,30,000/-	12 months	<b>30.6.15</b> <b>28.2.16</b>	Financial year 2015-16
7.	Engr. Muhammad Ali Nasir 1.Dr. Syed Masood ur Rehman Shah Muhammad Awais Saeed 14-MS-FT-AMD-03	Development of Gold Nano Particle-Based Strain Gauges/Sensors for online Structural Health Monitoring	9,71,375/-	18 months	<b>30.6.15</b> <b>30.8.16</b>	Financial year 2015-16
8.	Dr. Sayyid Masoodur Rehman Shah, 1.Saba Anjum 14-MS-FT-AMD-07	Effect of EDM Electrodes and dielectrics on the surface roughness of Aluminium 6061 T6 Cylinders	6,30,000/-	12 months	<b>30.6.15</b> <b>28.2.16</b>	Financial year 2015-16
9.	Dr. Muzaffar Ali 1.Dr. Hafiz M.Ali	Experimental Investigation of Efficiency Enhancement of PV Modules through Different Cooling Techniques	6,50,000/-	12 months	<b>30.6.15</b> <b>28.2.16</b>	Financial year 2015-16
10.	Prof. Dr. Shahid Khalil 1.Engr. Faisal Qayyum 2.Faryal Khan	Evaluation of Stresses Developed During Mannesmann Process: Simulation and Experimentation	5,42,000/-	12 months	<b>30.6.15</b> <b>28.2.16</b>	Financial year 2015-16



**Total : Rs. 73,60,775/-**

**d) Postgraduate Faculty Research Projects (Industrial) Rs. 9,97,500/-**

S#	Name of Principal Investigator/ Co-Investigator	Project title	Approved Amount (Rs)	Duration	Submission 1st & Final Progress Report	Approved Amount & Remarks
1.	Dr. Salman Hussain 1. Dr. Wasim Ahmad 2. Engr. Haji Bahader	Integration of surface modification and 3D fabrication techniques to develop innovative product for small and medium enterprises	9,97,500/-	18 Months	30.6.15 30.8.16	Financial year 2015-16
<b>Total: Rs. 15,17,500/-</b>						

**e) Postgraduate Faculty Research Projects (Computer) Rs. 9,56,000/-**

S#	Name of Principal Investigator/ Co-Investigator	Project title	Approved Amount (Rs)	Duration	Submission 1st & Final Progress Report	Approved Amount & Remarks
1.	Dr. Hafiz Adnan Habib	Speech Segregation from multi-stream auditory scene	9,56,000/-	12 months	30.6.15 28.3.16	Financial year 2015-16
<b>Total :Rs. 9,56,000/-</b>						

**f) Postgraduate Faculty Research Projects (Telecom) Rs. 36,06,100/-**

S#	Name of Principal Investigator/ Co-Investigator	Project title	Approved Amount (Rs)	Duration	Submission 1st & Final Progress Report	Approved Amount & Remarks
1.	Dr. Yasar Amin 1. Engr. Ayesha Habib Full Time PhD Student	RFID Integration Towards Internet of Things	10,00,000/-	12 Months	30.6.15 28.3.16	Financial year 2015-16
2.	Dr. Yasar Amin 1. Engr. Bilal Aslam Full Time PhD Student	Future impacts of RFID on Business Operations & Managing IT Infrastructure	10,00,000/-	12 Months	30.6.15 28.3.16	Financial year 2015-16
3.	Dr. Rahsid Saleem 1. Muhammad Bilal 14F-UET/PhD-TE-11	Novel Periodic Structures (FSS) For Stealth Application	8,20,550/-	24 months	30.6.15 28.3.17	Financial year 2015-16
4.	Dr. Rahsid Saleem 1. Engr. Tayyab Shabbir 14F-UET/PhD-TE-12	Novel Periodic Structures (FSS and Reflect array) For Stealth Defense Application	9,60,550/-	24 months	30.6.15 28.2.17	Financial year 2015-16
<b>Total: Rs. 36,06,100/-</b>						

**g) Postgraduate Faculty Research Projects (Computer Science) Rs. 10,29,000/-**

S#	Name of Principal Investigator/ Co-Investigator	Project title	Approved Amount (Rs)	Duration	Submission 1 <sup>st</sup> & Final Progress Report	Approved Amount & Remarks
1.	Dr. Zeshan Iqbal Assistant Professor	Indoor Vision Based Navigation	4,00,000/-	1.5 Years	30.6.15 30.8.16	Financial year 2015-16)
2.	Dr. Farrukh Zeeshan,	Home Grown Firewall with Https Filtering, Router, NAC, IDP/IDS and Wireless Access Point.	2,50,000/-	12 Months	30-8-15 30-2-16	Financial year 2015-16)
3.	Dr. Khurram Shehzad	Interactive Real-Time Tracking and Monitoring Solution for Vehicle	1,52,000/-	12 Months	30-8-15 30-2-16	Financial year 2015-16)
4.	Dr. Syed Adnan Shah	Smart Glasses Based on Augmented Reality Visualization with inbuilt 3D Depth Sensor for Gestures Recognition.	2,27,000/-	12 Months	30-8-15 30-2-16	Financial year 2015-16)
<b>Total: Rs. 10,29,000/-</b>						

**h) Postgraduate Faculty Research Projects (Electrical) Rs. 25,22,500/-**

S#	Name of Principal Investigator/ Co-Investigator	Project title	Requested Amount (Rs)	Duration	Submission 1 <sup>st</sup> & Final Progress Report	Approved Amount & Remarks
1.	Engr. Furqan Shaukat PhD Scholar(Elect), 1.Prof. Dr. Gulistan Raja	An Efficient Scheme for Lung Nodule Detection	17,42,500/	20 Months	30.6.15 30.10.16	Financial year 2015-16
2.	Dr. Ing. Ahsan Ali 1.Prof. Dr. Muhammad Ahmad Ch.	Linear Parameter varying Modeling and Trajectory Tracking Control of an Omni-directional Wheeled Mobile Rebot	7,80,000/-	18 months	30.6.15 28.9.16	Financial year 2015-16
<b>Total: Rs. Rs. 25,22,500/-</b>						

### 2.2.3 Newly Launched Projects

Following postgraduate faculty research projects were launched during the reporting year 2012-13.

SN	Researchers	Project Title	Cost (Rs)	Duration (months)
<b>Civil Engineering</b>				
1.	Prof. Dr. Saeed Ahmad, Hira Zahid	Effect of Blast Loadings on Structural Elements with Openings	500,000-	06
2.	Prof. Dr. Saeed Ahmad, Syeda Rafia Merriam Bokhari	Comparison of Manual and Computer Aided Analysis and Design of a Frame Structure Subjected to Blast Loading	480,000	04
3.	Prof. Dr. Abdul Razzaq Ghumman, Engr. M. Shafqat Mehboob,	Direct Runoff Hydrograph Models for Arid and Semi Arid Regions of District Attock	435,000	06
4	Prof. Dr. Liaqat Ali Qureshi, Engr. Muhammad Jawad,	Effects of different CFRP strengthening patterns on shear and flexural strength of hollow core precast slab units.	450,000	06
5.	Prof. Dr. Liaqat Ali Qureshi, Engr. Ali Ajwad	Study of shear and flexural strength of hollow core precast slab units by adding GFRC and high strength concrete topping	480,000	06
Sub-Total for Civil Engineering			2,345,000	
<b>Mechanical Engineering</b>				
1	1. Dr. Muhammad Shahid Khalil, Dr. Sayyid Masood ur Rahman Shah, Faryal Khan,	Study of the welding micro structure in tool steels.	460,000	18
2	Prof. Dr. Muhammad Shahid Khalil, Muhammad Ajmal	Theoretical and Numerical Modeling of Anisotropic Plastic Behavior Coupled with Ductile Damage	375,000	36
3	Dr. Sayyid Masoodur Rahman Shah, Rubab Arshad,	Manufacturing of EDM electrode with a new material" Copper-Graphite" for machining of AL 6061 alloy.	158,500	18
SN	Researchers	Project Title	Cost (Rs)	Duration (months)
4	Dr. Sayyid Masoodur Rahman Shah, Osama Shakeel,	Investigation of Thermo-mechanical stresses in Hot Rolls during Brass Hot Rolling.	506,904	18
5	Dr. Hafiz Muhammad Ali, M. Zeshan Qasim	Augmentation of Heat Transfer on Horizontal Condensing Tube	1,000,000	18-24
6	Dr. Hafiz Muhammad Ali, Mr. Waqas Arshad	Experimental Thermal Enhancement of Electronic Devices	1,000,000	18-24
7	Dr. Riffat Asim Pasha,	Electric Discharge Machining (EDM)	835,000-	24

	Shah`id Mehmood	generated Surface Finish and its Effect on Fatigue Life of Aerospace Alloys		
Sub-Total for Mechanical Engineering			4,335,404	
<b>Civil and Electrical Engineering</b>				
1.	Prof. Dr. M.A. Kamal, 1.Engr.Imran Khan, MSc Student	Study of a Road accident’s scenario using traffic simulator software	120,000	18
2.	Dr. Sarmad Sohaib Engr.Qamar Zaman,	Data Acquisition System of Parameters Affecting Permanent Deformation in Pavements	1,049,000	15
3.	Dr. Ing. Ahsan Ali, Prof. Dr. M. A. Ch., Engr. Mansoor Ahsan Ali	Robust Gain-Scheduled Control of a 4-axis Control Moment Gyroscope	1,000,000	12
Sub-Total for Mechanical Engineering			2,169,000	

### 2.3 Publications

93 research papers are published in local and international journals and are also presented in national/international conferences during the Year 2013-14.

SN	Authors	Title of the paper	Year	Journal
<b>Computer Engineering</b>				
1.	Kamran Javed, Naveed Khan Baloch, Fawad Hussain, <b>Dr. M. Iram Baig</b>			
2.	Muhammad Haroon Yousaf, Hafiz Adnan Habib, Kanza Azhar, Fawad Hussain, Muhammad Rizwan, Malik M. Asim	Towards The Development of Virtual Keyboard: An Activity Recognition Approach	2013	Life Science Journal
3.	Arslan Mubashar Khan, Waqas Umar, Taimoor Choudhary, Fawad Hussain, Muhammad Haroon Yousaf	A New Algorithmic Approach for Fingers Detection and Identification	2013	International Conference on Graphic and Image Processing (ICGIP 2012)
4.	Muhammad Haroon Yousaf, Hafiz Adnan Habib, Kanza Azhar	Fuzzy Classification of Instructor’s Morphological Features Autonomous Lecture Recording System	2013	Information Journal

<b>Software Engineering</b>				
	Ghazanfar, M. and Prugel-Bennett	Leveraging Clustering Approaches to Overcome Gray-Sheep Users Problem in Recommender Systems	2014	In Information Science Journal
	Ghazanfar, M	Building Scalable Switching Hybrid Recommender systems using Machine Learning Classifiers, SVD, and Collaborative Filtering	2014	In Information Science Journal

<b>Industrial Engineering</b>				
1	Ali Rizwan, Saadia Farooq, M.S.I. Alvi, Silvet Nawaz	Analysis Of Factors Affecting The Stress Level Of Female Engineering Students	2012	Global Journal of Human Social Science: Arts and Humanities
2	Syed Gul Hassan Naqvi, Syed AtharMasood, ShahabKhushnood , Ali Rizwan, & Mirza Jahanzaib.	The Rollover Prediction and Prevention of Bullet Proof Vehicles for Improved Stability	2013	Life Science Journal
3	Ali Rizwan, M.S.I. Alvi, Moeen-ud-Din Saeed,	Analysis of Factors Affecting the Stress Level of Engineering Students Belonging Remote Areas	2013	International Journal of Engineering Education
4	Ahmad Wasim, Essam Shehab, Hassan Abdalla, Ahmed Al-Ashaab, Robert Sulowski RahmanAlam	An innovative cost modeling system to support lean product and process development	2013	The International Journal of Advanced Manufacturing Technology
5	Dr. Mirza Jahanzaib and colleagues	Improvement in Subsisted Product Delivery Process of Manufacturing Organization using Concurrent Engineering	2013	Life Sci J, Acta Zhengzhou University Oversea Version
6	Dr. Mirza Jahanzaib and colleagues	Key Performance Indicators Prioritization in Whole Business Process: A Case of Manufacturing Industry	2013	Life Sci J, Acta Zhengzhou University Oversea Version
7	Dr. Mirza Jahanzaib and colleagues	Managing Competitiveness using Production Volumes - Product Variety Model	2013	Life Sci J, Acta Zhengzhou University Oversea Version

		for Automobile Industry		
8	Dr. Mirza Jahanzaib and colleagues	Performance Analysis of Process Parameters Effecting the Automated Assembly System	2013	Life Sci J, Acta Zhengzhou University Oversea Version
9	Mukhtar Husain Sahir	Energy Analysis of Chilled Water System Configurations using simulation based optimization	2013	Energy & Buildings
10	Mukhtar Husain Sahir	Development and validation of a Desiccant Wheel Model calibrated under transient operation conditions.	2013	Applied Thermal Engineering
11	Muhammad Ashraf Mirza Jahanzaib, Wasim Ahmed, Salman hussain	Production Planning and Control of Assembly Process for the High Tech Products	2013	Technical Journal, UET, Taxila
12	Muhammad Khurram Ali, Rafi Javed Qureshi, Mirza Jahanzaib	Selecting Facility Location Using Hybrid Methodologies in Global Perspective.	2013	Journal of Engineering and Applied Sciences. UET, Peshawar
13	Mirza Jahanzaib, Syed Athar Masood, Omer jamil, Khalid Akhtar	Product Design Variables Optimization using Design for Six Sigma	2013	Life Sci J, Acta Zhengzhou University Oversea version.
14	Mirza Jahanzaib, Syed Athar Masood, Shahid Nadeem , Khalid Akhtar	A Genetic Algorithm Approach for the formation of Manufacturing Cells in Group Technology	2013	Life Sci J, Acta Zhengzhou University Oversea version.
15	Abid Ali, Rafi Javed Qureshi, Mirza Jahanzaib	Performance Improvement of Flexible Manufacturing System	2013	Research Journal of Science and IT Management
16	Abdul Aleem, Muhammad Shahid Khalil	Inventory Optimization through Safety Stock Schemata	2013	Mehran University Research Journal of Engineering and technology
17	Abid Ali, Rafi Javed Qureshi, Mirza Jahanzaib	Performance Improvement of Flexible Manufacturing System	2013	Research Journal of Science and IT Management
18	Muhammad Azam, M Jahanzaib, Wasim Ahmad, S Hussain	Surface Roughness Modeling using RSM for HSLA Steel by Coated Carbide Tools	2014	International Journal of Advanced Manufacturing technology
19	M. Khurram Ali,	A Hybrid	2014	Mehran University

	Khalid Akhtar, M. Jahanzaib	Multidimensional Approach to select a Country for Global Cement Plant location		Research Journal of Engineering & Technology
20	Ullah Saif, Zailin Guan, Boaxi WANG, Jahanzeb Mirza	Pareto lexicographic a-robust approach and its application robust objective assembly line balancing problem,	2014	Frontiers of Mechanical Engineering
21	Ullah Saif, Zailin Guan, Boaxi WANG, Jahanzeb Mirza, Shiyang HUANG	Survey of Assembly lines and its Types	2014	Frontiers of Mechanical Engineering
22	Muhammad Ashraf, Mirza Jahanzaib, Wasim Ahmed, Salman Hussain	Production Planning and Control of Assembly process for the High Tech Products	2014	Technical Journal UET Taxila
23	M. Imran, N. Iqbal, M. Jahanzaib	Minimization of Intercellular Movements in Cellular Manufacturing System Using Genetic Algorithm	2014	Technical Journal UET Taxila
24	G. Asghar, M. Jahanzaib, M. Nouman	Leverage of Advanced Manufacturing Effectiveness	2014	Technical Journal UET Taxila
25	A ali, M Jahanzaib, M. Nouman,	Manufacturing Flexibility and Agility	2014	A Distinctive Comparison
26	Kamran Gohar, Mirza Jahanzaib, Khurram Ali	Consumer Preferences for Selection of Solar System for Domestic Purposes in Urban areas	2014	Mehran Journal of Engineering
27	Ali, M. Jahanzaib and H. Aziz	Manufacturing Flexibility and Agility	2014	A distinctive Comparison
28				
<b>Civil Engineering</b>				
1	Prof. Dr. Saeed Ahmad	Shear strengthening of short span reinforced concrete beams with CFRP sheets	2013	Arabian Journal for Science and Engineering, Vol. 38, No. 3, pp. 523-536
2.	Prof. Dr. Saeed Ahmad	Repair of cracks in simply supported beams using epoxy injection techniques	2013	Materials and Structures, Vol. 46, No. 9, pp. 1547-1559

3.	Prof. Dr. Saeed Ahmad	Investigation of Shear Behavior Corbel Beams strengthened with CFRP	2013	Life Science Journal, Vol.
4.	Prof. Dr. Saeed Ahmad	Evaluation of the Shear Strength of Dapped Ended Beam	2013	Life Science Journal, Vol. 10, No. 3, pp. 1038-1044
5.	Prof. Dr. M.A. Kamal	Determining the Contribution of Different Structural Layers of Asphalt Pavement System to Rutting Using Transverse Profile Analysis	2013	American Journal of Civil Engineering and Architecture, pp. 174-180
6.	Prof. Dr. Abdul Razzaq Ghumman	Comparison of Clark And Geographical Instantaneous Unit Hydrograph Models For Arid And Semi-Arid Regions	2013	Journal of Water Resources,
7.	Prof. Dr. Abdul Razzaq Ghumman	Investigation of impact of environmental changes on precipitation pattern of Pakistan	2013	Journal of Environmental Monitoring and Assessment, Vol. 185, pp. 4897–4905
8.	Prof. Dr. Hashim Nisar Hashmi	Performance Assessment of Water Filtration Plants (A Case Study of Sialkot),	2013	International Journal of the Water Resources and Env. Engg., Vol. 7, pp. 5266-5272
9.	Prof. Dr. Liaqat Ali Qureshi	Effect of using Mineral Admixtures as Cement Replacement Materials on Permeation Properties of High Strength Concrete	2013	Proceedings of "The 8th International Symposium on Cement & Concrete (ISCC2013)", Nanjing, China, 20-23 September (2013), pp. 45-54
10.	Prof. Dr. Liaqat Ali Qureshi	Effect of using Mineral Admixtures as Cement Replacement Materials on Compressive Strength of High Strength Concrete	2013	Proceedings of "The 5th International Conference on the Concrete Future", Covilha, Portugal, 26-28 May (2013), pp. page CF169 – CF178
11.	Prof. Dr. Liaqat Ali Qureshi	An investigation on Strength Properties of Glass Fiber Reinforced Concrete	2013	International Journal of Engineering Research & Technology (IJERT), (ISSN: 2278 – 0181), Vol. 2, No. 4, (2013), pp. 2567-2572



12.	Prof. Dr. Liaqat Ali Qureshi	Comparison of 2D & 3D Finite Element Analysis of underground Water Tanks Based on Soil-Structure Interaction using GTS	2013	Proceedings of "The seventh International Structural Engineering & Construction Conference (ISEC7)" held on 18-23 June 2013 in ., Honolulu, Hawaii, USA, 18-23 June (2013)
13.	Prof. Dr. Liaqat Ali Qureshi	Seismic Analysis and Design of High Rise Buildings in Different Base Profiles	2013	Proceedings of "The seventh International Structural Engineering & Construction Conference (ISEC7)" held on 18-23 June 2013 in, Honolulu, Hawaii, USA, 18-23 June 2013
14.	Prof. Dr. Qaiser uz Zaman Khan	Investigation of water tank as TLD for vibration control of frame structure under seismic excitations	2013	Life Science Journal, Vol. 7, No. 188, (2013), pp. 1182-1189
15.	Prof. Dr. Qaiser uz Zaman Khan	Investigation of Seismic Performance of Vertically Irregular Reinforced Concrete Buildings	2013	Life Science Journal, Vol. 12, No. 154, (2013), pp. 949-955
16.	Dr. Muhammad Yaqub	Strength and stiffness of post-heated columns repaired with ferro cement and fibre reinforced polymer jackets.	2013	Composites Part B: Engineering, Elsevier Vol 44, No.1 (2013)
17.	Dr. Muhammad Yaqub	Effect of FRP on compressive strength of unheated and post heated concrete,	2013	Life Science Journal, Vol. 12, No. 94, (2013), pp. 577-583
18.	Dr. Muhammad Yaqub	Experimental versus design guideline predictions for confined strength and axial load carrying capacity of circular concrete cylinders wrapped with CFRP	2013	Life Science Journal, Vol. 12, No. 110, (2013), pp. 684-695
19.	Dr. Usman Ghani	An Experimental Study of Turbulent Flow Over a Weir-Like Structure With and Without Vegetation	2013	Life Science, Vol. 10, No. 9, (2013), pp. 315
20.	Dr. Imran Hafeez	Laboratory fatigue performance evaluation of different field laid asphalt mixtures	2013	Construction and Building Materials., Vol. 44, No. 44, (2013), pp. 792-797
21.	Dr. Imran Hafeez	Impact Evaluation of Locally Available Modifiers for Stabilization of Subgrade soil through Triaxial and Impact Hammer Testing Techniques	2013	International Journal of Scientific & Engineering Research, (2013)

22.	Dr. Imran Hafeez	The Evaluation of Structural Performance of New Benazir Bhutto International Airport Islamabad, Pakistan	2013	Life science Journal, Vol. 10, No. 12, (2013), pp. 647-652
23.	Dr. Imran Hafeez	Sensitivity Analysis of Design Variables of Flexible Pavement Design Equation in the AASHTO 1993 Design Guide	2013	Life science Journal, Vol. 2013, (2013), pp. 878-882
24.	Dr. Imran Hafeez	A field study of environment degradation during road construction and its improvement due to sprinkling of water	2013	Life science Journal, Vol. 10, (2013), pp. 888-893
25.	Dr. Imran Hafeez	Influence of Time and Temperature on Asphalt Binders Rheological Properties	2013	Life science Journal, Vol. 10, No. 12, (2013), pp. 894-898
26.	Dr. Imran Hafeez	To Study the viscoelastic behavior of Asphalt Binders using under Multi Stress Creep Recovery Test	2013	Life science Journal, Vol. 10, No. 12, (2013), pp. 921-925
27.	Dr. Naveed Ahmad	Application of surface free energy techniques to evaluate bitumen-aggregate bonding strength and bituminous mixture moisture sensitivity	2013	ICE Construction Materials, (2013),
28.	Dr. Naveed Ahmad	Assessing asphalt mixture moisture susceptibility through intrinsic adhesion, bitumen stripping and mechanical damage	2013	Road Materials and Pavement Design, (2013), pp. 1-22
29.	Dr. Naveed Ahmad	Examination of moisture sensitivity of aggregate-bitumen bonding strength using loose asphalt mixture and physico-chemical surface energy property tests	2013	International Journal of Pavement Engineering, (2013), pp. 1-14
30.	Dr. Naeem Ejaz	Assessment of most critical success factors for mega construction projects in Pakistan	2013	Life Science Journal, (2013), pp. 255-261
31.	Dr. Naeem Ejaz	Performance of concrete under aggressive wastewater environment using different binders	2013	Life Sciences, Vol. 10, No. 10, (2013)

32.	Dr. Naeem Ejaz	Assessment of most critical success factors for mega construction projects in Pakistan	2013	Life Sciences, Vol. 10, No. 10, (2013)
33.	Dr. Faheem Butt	Finite element model calibration of an instrumented RC building based on seismic excitation including non-structural components and soil-structure interaction, From Materials to Structures: Advancement through Innovation	2013	Taylor and Francis Group, London, (2013), pp. 251-256, CRC Press
34.	Dr. Faheem Butt	Evaluation of nonlinear seismic responses of full-scale instrumented buildings, Nonlinear Dynamics in Engineering: Modelling, Analysis and Applications	2013	Aberdeen, UK, 21-23 August, 2013 (2013)
35.	Muhammad Usman Arshad	Assessment Of Variation In Soil Parameters, For Design Of Lightly Loaded Structural Foundations	2013	Life Science Journal, Vol. 10, No. 12, (2013), pp. 217-220
36.	Mehwish Asad	Role of Supplementary Cementitious Materials in enhancing Concrete Properties	2013	Life Science Journal, (2013), pp. 956-960
37.	Kashif Riaz	Comparison of Neat and Modified Asphalt Binders Using Rheological Parameters under Virgin, RTFO and PAV Aged condition	2013	Life science Journal, Vol. 10, No. 3, (2013), pp. 2041-2047

### Mechanical Engineering

1	Shahab Khushnood	Effect of Current in the EDM Machining of Aluminum 6061 T6 and its Effect on the Surface Morphology	2013	The Arabian Journal for Science and Engineering
2	Shahab Khushnood	Numerical Simulation of Aero-spike nozzle in-viscid Isentropic Flow-Field	2013	Life Science Journal

5	Shahab Khushnood	Experimental and Numerical Study of Buoyancy Driven Flow within a Bottom Heated Vertical Concentric Cylindrical Enclosure	2013	– Natural Science, Scientific Research Open Access
16.	Riffat Asim Pasha	Numerical simulation and experimental verification of CMOD in SE(T) specimen: Application on FCGR of welded tool steel	2013	Acta Metall. Sin. (Engl. Lett.)
17.	Riffat Asim Pasha	Design Optimization And Analysis Of Vertical Axis Wind Turbine Blade.	2013	The Nucleus
18.	Riffat Asim Pasha	Measurement and Suppression of cutting tool vibration Using Piezoelectric ceramic in ANSYS	2013	The Nucleus
19.	Sheryar. Manzoor	The transient temporal response of a flexible bridge deck subjected to a single gust	2013	Journal of Computational and Applied Mathematics
24.	Dr. Sayyid masoodur Rehman Shah	Numerical simulation and experimental verification of CMOD in SE(T) specimen: Application on FCGR of welded tool steel.	2013	Acta Metallurgica Sinica – (English Letters) 72, Wenhua Road, Shenyang 110016, China
25.	Dr. Sayyid masoodur Rehman Shah	Effect of Current in the EDM Machining of Aluminum 6061 T6 and its effect on the surface morphology	2013	The Arabian Journal For Science and Engineering, KFUPM, Dhahran, Saudi Arabia,
	Samra Arooj, Masood Shah, Shahid Sadiq, Syed Hussain Imran Jaffery, Shahab Khushnood	Effect of Current in the EDM Machining of Aluminum 6061 T6 and its effect on the surface morphology	2014	Arabian Journal for Science and Engineering
	Ktari. A, Baccar. M, Shah. M, Haddar. N, Ayedi	A crack propagation criterion based on $\sqrt{CTOD}$ measured with 2D-digital image correlation technique	2014	Fatigue and Fracture of Engineering Materials and Structures

	F. Qayyum, M. Shah, S. Manzoor and M. Abbas	Comparison of thermomechanical stresses produced in work rolls during hot and cold rolling of Cartridge Brass 1101	2014	Materials Science and Technology
	Muhammad Ali Nasir, Zaffar M. Khan, Saad Nauman, Saad Anas, Masood Shah, Zeeshan Asfar, Shahab Khushnood	Online In-situ Structural Health Monitoring of Polymer Composites using Polystyrene/Carbon Black Coated Fabric	2014	Journal of Nanomaterials
	Muhammad Ali Nasir, Zaffar Khan, Ilyas Farooqi, Saad Nauman, Saad Anas, Shahid Khalil, Asim Pasha, Zubair Khan, Masood Shah,	Transverse Shear Behavior of Nomex Core for Sandwich Panels	2014	Mechanics of Composite Materials
	Masood SHAH*, Mifrah ALI, Amir SULTAN, Muhammad MUJAHID, Haroon MEHMOOD, Nazam	An Investigation into the Fatigue Crack Growth Rate of Electron Beam Welded H13 Tool Steel: Effect of Welding and Post Weld Heat Treatment, Metallurgy	2014	Microstructures and Analysis
	M Shahid Khalil	Experimental Based Tensile Strength Variability of Multilayered Composites, Fabricated via. Optimized "VARTM" Technology	2014	IBCAST
	Muhammad Anser BASHIR, Hafiz Muhammad ALI, Shahid Khalil, Muzaffar ALI, and Aysha Maryam SIDDIQUI	Comparison of Performance Measurements of Photovoltaic Modules during Winter Months in Taxila, Pakistan	2014	, International Journal of Photoenergy
	Ali, H.M, Mahmood, M, Bashir, Muzaffar Ali, M. and Siddiqui	Outdoor Testing of Photovoltaic Modules during Summer in Taxila, Pakistan	2014	Thermal Science International Scientific Journal
<b>Environment Engineering</b>				
1.	Dr. Saeed Ahmad	Repair of cracks in simply supported beams using epoxy injection techniques	2013	Materials and structures

2.	Dr. Saeed Ahmad	Evaluation of the Shear Strength of Dapped Ended Beam	2013	Life Science Journal
3.	Dr. Liaqat Ali Qureshi	Effect of using Mineral Admixtures as Cement Replacement Materials on Permeation Properties of High Strength Concrete	2013	The 8 <sup>th</sup> International Symposium on Cement & Concrete
4.	Dr. Liaqat Ali Qureshi	Effect of using Mineral Admixtures as Cement Replacement Materials on Compressive Strength of High Strength Concrete <sup>4</sup>	2013	The 5 <sup>th</sup> International Conference on the Concrete Future
5.	Dr. Liaqat Ali Qureshi	An investigation on Strength Properties of Glass Fiber Reinforced Concrete	2013	International Journal of Engineering Research & Technology
6.	Dr. Liaqat Ali Qureshi	Comparison of 2D & 3D Finite Element Analysis of underground Water Tanks Based on Soil-Structure Interaction using GTS	2013	The seventh International Structural Engineering & Construction
7.	Dr. Liaqat Ali Qureshi	Seismic Analysis and Design of High Rise Building in Different Base Profiles	2013	The seventh International Structural Engineering & construction
8.	Sidra Iftekhar	Role of Supplementary Cementitious Materials in Enhancing Concrete Properties	2013	Life Science Journal
9.	M. Bilal Asif	Role of Supplementary Cementitious Materials in Enhancing Concrete Properties	2013	Life Science Journal
<b>Electrical Engineering</b>				

1.	M. Zafrullah, M. B. Iqbal, M. R. Asif and M. K. Islam	Performance Analysis of BER optimization in WDM systems using EDFA	2014	Journal of Modern Optics
2.	<b>M. Zafrullah</b> , M. Roman and M. K. Islam	Content Searching Scheme with Distributed Data Processing Service in Content Centric Networking	2014	Journal of Basic and Applied Scientific Research (JBASR)
3.	<b>M. Ashraf</b> , M. Iqbal and <b>T. N. Malik</b>	Peak Load Sharing based on Blade Pitch Control of Wind Turbine in the Presence of Utility Supply	2014	Journal of Renewable and Sustainable Energy,
4.	<b>M. Ashraf</b> , <b>T. N. Malik</b> and M. Iqbal	Development of a Prototype Micro Wind Energy System with Adjustable Blade Pitch for Experimentation Purposes at Laboratory Level	2014	The Nucleus (Pak)
5.	R. Afzal, <b>Gulistan Raja</b> , A. Khan	Reduction of Color Images using Averaging Functions	2014	Technical Journal of UET Taxila
6.	<b>Salman Amin</b> , Muhammad Amin	Aging Research on SIR and TPE Insulators	2014	Reviews on Advanced Materials Science
7.	M.A. Nasir , R. A. Pasha, R. A. Rahman, <b>Salman Amin</b>	Density Variation Effects on Cross Dimension Strength of Phenolic Multilayered Composites Fabricated via VARTM	2014	The Nucleus
8.	Mateen Ashraf, <b>Sarmad Sohaib</b>	Energy Efficient Delay Tolerant Space Time Codes for Asynchronous Cooperative Communications	2014	Transactions on Emerging Telecommunications Technologies
9.	<b>M. A. Choudhry</b> and Ikram ul Haq	Performance Enhancement Technique to Incorporate Muzzle Reference Data in the Ballistic Computer	2013	Arab J Sci Eng

10.	M. Z. Ashraf and <b>M. A. Choudhry</b>	Dynamic Modeling of the Airship with MATLAB Using Geometrical Aerodynamic Parameters	2013	Aerospace Science and Technology
11.	Faisal Masood, <b>Tahir Mahmood</b> , and <b>Mohammad Ahmed Choudhry</b>	Modeling and Simulation of Matrix Converter for Wind Power Generation”, Published in The Nucleus, A quarterly Scientific Journal of Pakistan	2013	NCLEAM
12.	S. H. Shah, M. N. Majoka and <b>Gulistan Raja</b>	Design and Implementation of 32-bit Vedic Multiplier on FPGA” Proceedings of 1st Intl. Conf. on Modern Communication	2013	Aerospace Science and Technology
13.	<b>Tahir Mahmood</b> , Salman Zafar, Hasham Khan, Faisal Masood, and Jamil Ahmad Khan	Loading Balance of Distribution Feeders with a Generic Loop Power Flow Controller	2013	Published in Life Science Journal
14.	Syed Auon Raza, <b>Tahir Mahmood</b> , Syed Basit Ali Bukhari and M. Kashif Nawaz	Application of Optimization Techniques in Overcurrent Relay Coordination-A Review	2013	World Applied Sciences Journal
15.	<b>Tahir Mahmood</b> , Hasham Khan and <b>M. A. Choudhry</b>	Pakistan’s Hydro Potential and Energy Crises	2013	Published in Life Science Journal
16.	A. K. Khan, <b>Gulistan Raja</b> and <b>Ahmad Khalil Khan</b>	Implementation of Marker based Watershed Image Segmentation on Magnetic Resonance Imaging	2013	Life Sci
17.	<b>Gulistan Raja</b> , A. Khan, <b>Ahmad Khalil Khan</b> , M. H. Yousaf	Performance Analysis of HEVC In-Loop Filter	2013	Life Sci
18.	Adil Farooq, <b>Ahmad Khalil Khan</b> , <b>G. Raja</b>	Implementation of a Speech Based Interface System for Visually Impaired Persons	2013	Life Sci



19.	Jawad A. Raja, <b>Gulistan Raja,</b> <b>Ahmad Khalil</b> <b>Khan</b>	Selective Compression of Medical Images using Multiple Regions of Interest	2013	Life Sci
20.	A. Younus, <b>Gulistan</b> <b>Raja, Ahmad</b> <b>Khalil Khan</b>	Hybrid Compression of Medical Images based on Lapped Biorthogonal Transform and Discrete Cosine Transform	2013	Life Sci
21.	Baber Khan, <b>Ahmad Khalil</b> <b>Khan, G. Raja, M. H.</b> Yousaf	Implementation of Modified Mean-shift Tracking Algorithm for Occlusion Handling	2013	Life Sci
22.	<b>Gulistan Raja, A.</b> Khan, A. Rashid and <b>Ahmad Khalil</b> <b>Khan</b>	Performance Analysis of Emerging High Efficiency Video Coding	2013	Life Sci
23.	A. Younus, <b>Gulistan</b> <b>Raja, A. K. Khan</b>	Hybrid Compression of Medical Images based on Lapped Biorthogonal Transform and Discrete Cosine Transform	2013	Life Sci
24.	S. Zafar Ali, M. K. Islam and <b>M.</b> <b>Zafrullah</b>	Effect of message parameters in Additive Chaos Modulation in Erbium Doped Fiber Ring Laser (EDFRL	2013	International Journal for Light and Electron Optics, Elsevier,
25.	R. Asif, M. K. Islam and <b>M. Zafrullah</b>	All-Optical Signal Processing of Fiber Impairments in Dual- Polarization 112Gbit/s m-ary QAM Coherent Transmission	2013	Journal of The Optical Society of Korea
26.	S. Z. Ali, M. K. Islam and <b>M. Zafrullah</b>	Effect of Transmission Fiber on Dense Wavelength Division Multiplexed (DWDM) Chaos Synchronization	2013	International Journal for Light and Electron Optics
27.	Shahzad, <b>M.</b> <b>Zafrullah, M. K.</b> Islam, R. Maldonado-Basilio and P. Landais	Characterization of 60 GHz Multi Quantum Well Passively Mode-locked Laser under Optical Self Injection Locking	2013	International Journal for Light and Electron Optics

28.	M. N. Majeed, S. P. Chattha, A. Akram and <b>M. Zafrullah</b>	Vehicular Adhoc Networks History And Future Development Arenas	2013	International Journal of Information Technology and Electrical
29.	<b>Sarmad Sohaib</b> and Daniel K. C. So	Asynchronous Cooperative Relaying for Vehicle-to-Vehicle Communications, in IEEE Transactions on Communications	2013	
30.	Imran Hashmi, Habibullah Jamal, <b>Tahir Muhammad</b>	Evaluating FPGA Virtex-II Board using Dynamic Partial Reconfiguration	2013	International Journal of Computer Applications
31.	<b>AbuBakr Waqas, T. Muhammad</b> and H. Jamal	Simulation of Modified Hybrid Noise Reduction Algorithm to Enhance the Speech Quality	2013	Nucleus
32.	S. Zaheer, <b>S. Haroon, T.N. Malik</b> and I. Hashmi	Review On The Implementation Of Particle Swarm Optimization Technique In Solving The Hydrothermal Scheduling	2013	The Nucleus
33.	I. Hashmi, M. Umair, N.U. Islam, <b>S. Haroon</b> and <b>T. Nadeem</b>	Survey On Application Of Lagrangian Relaxation, Interior Point And Dynamic Programming For The Solution Of Hydrothermal Scheduling	2013	The Nucleus
34.	M. R. Rehman and <b>Gulistan Raja</b>	Field-Programmable Gate Array (FPGA) Implementation of Lapped Biorthogonal Transform for JPEG XR Compression	2013	Sci. Research & Essays
35.	M. L. Shahid and <b>Gulistan Raja</b>	Implementation of Modified Control Point Image Registration Method	2013	The Nucleus
36.	Imran Ghous, Habibullah Jamal and <b>Tahir Muhammad</b>	TMS320C6713 DSK Implementation of G.711 Coded VoIP Signal	2013	International Journal of Computer Applications

37.	<b>Imran Ghous, Tahir Muhammad,</b> Habibullah Jamal	Modified Digital Filtering Algorithm to Enhance Perceptual Evaluation of Speech Quality (PESQ) of VoIP	2013	IJIGSP
38.	<b>Munira Batool, Aftab Ahmad</b>	Mathematical modeling and speed torque analysis of three phase single phase squirrel cage induction motor using MATLAB simulink for	2013	International Electrical Engineering Journal
39.	U. Rashid, <b>F. Siddiq, T. Muhammad</b> and H. Jamal	Area and Power Efficient Decimation Filters for Wireless Applications	2013	The Nucleus
40.	<b>F. Siddiq, T. Muhammad</b> and H. Jamal	Area Efficient Radix-4 64 Point FFT using Modified CSD Multiplier	2013	The Nucleus
41.	<b>M. M. Ashraf, T. N. Malik,</b> S. Zafar, and U. N. Raja	Design and Fabrication of Radial Flux Permanent Magnet Generator for Wind Turbine Applications	2013	The Nucleus
42.	<b>M. Iqbal, F. Karim, S. Haroon, M. M. Ashraf,</b> I. Ahmad, <b>T. N. Malik,</b> and A. Ahmad	Application of Evolved Evolutionary Algorithms for the Solution of Different Aspects of Hydrothermal Scheduling- A Comprehensive	2013	The Nucleus
43.	<b>Sarmad Sohaib,</b> Daniel K. C. So	Asynchronous Cooperative Relaying for Vehicle-to-Vehicle Communications, IEEE Transactions on Communications	2013	

## 2.4 Conference, Seminar and Workshops Organized

SN	Title	Dates	No. of Speakers	Approximate Participants (Nos.)
1	Soft desk organized a Microsoft Seminar with the recommendation of Advisor Engr Javed Ali	1 <sup>st</sup> -Dec-2014	01	90
2	A team of Soft desk went to the GIKI event to represent UET Taxila in different competitions of ACM GIKI chapter	4 to 6 <sup>th</sup> -Dec.		
3	Frequent Pattern Mining Algorithms for Finding Associated Frequent Patterns for Data Streams	2014		
4	Leveraging clustering approaches to solve the gray-sheep users problem in recommender systems	2014		
5	"Icuba" 2014 arranged at ISRA University Hyderabad	24-Nov-2014		
6	PIEAS Engg. Research Summit-PERS 14	02-Oct-2014		
7	International Research Workshop "Developing a Researcher"	11-12-2014		
8	Students Professional development conference Pakistan	08-10-May-2014		
9	Training program with the title of Vaccum cryogenic and its industrial applications	11-12-June 2014		
10	Workshop having the title of "Advanced Quantitative Analysis through SPSS and AMOS	22-March-2014		
11	Application of CDM on Renewable Energy projects	30-Apr-2014		
12	Workshop on Microscopy was held at Quid-e-Azam university	30-Apr-2014		
13	Seminar on Application CDM on Renewable energy projects.	30-Apr-2014		
14	Public Awareness Seminar on "Environmental Radioactivity and Harmful Effects of ionizing Radiations" by PNRA. Environment Deptt.	2013/14		55
15	Lecture on "Research Journals" at UET Taxila, Civil Engg Dept.		One	45

16	Lecture on "Importance of Soft Skills" at Rawalpindi Chamber of Commerce and Industries	15-Jul-2012	One	50
17	Political and Economic Conference 12 at Serene Hotel Islamabad	3-Oct-2012	Five	250
18	Seminar on "How To Deal with People" at Bentley Systems Pakistan PVT. LTD.	24-Oct-2012	One	70
19	Training course on "Emotional Intelligence" at Abasyn University Islamabad	6-Sep-2012	One	20
20	A Motivational Talk on "Secrets of Successful People" with ASME Islamabad --- American Society for Mechanical Engineers Islamabad Chapter	14-Dec-2012	Three	150
21	Faculty Training Workshop at Sapien Hall School	9-Feb-2013	One	50
22	Seminar at "Habits of Leaders" at International Islamic University Islamabad	8-March-2013	Two	300
23	Workshop on "Job Hunting and Career Planning Skills" at Fatima Jinnah Women University	11-Jun-2013	One	200
24	Workshop on "Emotional Intelligence" at Ibrahim Group of Companies	29-Jun-2013	One	40
25	Workshop on "Emotional Intelligence" at ARL(Attock Refinery Limited)	13-Jun-2013	One	30
26	Workshop on "Enhancing Interpersonal Effectiveness"	4-Oct-2013	One	50
27	Lecture at CMH (Combined Military Hospital)	8-Oct-2013	One	300
28	Workshop on "People Dealing Skills at ARL" (Attock refinery Limited)	9-Oct-2013	One	30
29	Workshop on "Effective Communication" at International Islamic University Islamabad	11-Oct-2013	Three	250

## 2.5 Visits of the Faculty

University encourages its faculty members to display their academic achievements at national/international forums. To this end, the faculty members are encouraged to apply for HEC to attend seminar and conferences in foreign countries. Such seminars and conferences provide a forum for university-industry interaction as well.

SN	Name of the visitor	Country	Dates	Purpose	Sponsored by
1	Prof. Dr. Abbas Chaudhry, Prof. Dr. Muhammad Khalil, Dr. Mirza Jahanzeb, Irfan Mirza (CEO Energy Development)	Karachi (Pakistan)	Nov. 2012	Visited Ghampir Power Project	FFC and ZOLO (Turkey)
2	Student professional development conference (Saadoon Atif)	Pakistan	20-22 feb. 2013	Technical and leadership skills	ASME International
3	Days of Productivity (Saadoon Atif)	Turkey	20-24 March 2013	Concept of brands and development of entrepreneurship skills	Gazi University Ankara, Turkey
4	International Mechanical Engineering Convention'13 (Saadoon Atif)	Pakistan	21-23 April 2013	Technical Skills	GIKI
5	Pakistan Society of computational science 2nd Annual Conference (Zahid, Arsalan, Simab)	Pakistan	20-25 October 2013	Research on computational Science	IIU, Islamabad, old campus
6	2nd Annual Conference on Entrepreneurship	Pakistan	30 Nov.	Networking with entrepreneurs of Pakistan	EDI
7	Prof. Dr. Saeed Ahmad	Singapore	15-16 Nov, 2012	to present research paper in the 5th International Conference on Protection of structures against Hazards,	HEC
8	Prof. Dr. Saeed Ahmad	Singapore	22-23 August, 2013	to present research paper in the 38th conference on Our World in Concrete & Structures	HEC

9	Prof. Dr. A. R. Ghumman	Riyadh, Saudi Arabia	6-9 January, 2013	International Conference on water Resources and Arid Environments	UET, Taxila
10	Prof. Dr. Mumtaz Ahmed Kamal	UK	27 – 28 Feb. 2013	to present research paper in the 12th Annual International Conference on Pavement Engineering and Infrastructure	HEC
11	Prof. Dr. Liaqat Ali Qureshi	Portugal	25 June to 1st July 2013	To present paper in the 5th International Conference on The Concrete Future held in Portugal.	Nil
12	Dr. Imran Hafeez	USA	12th June 2012 To 14th March 2013	Postdoc Research Studies	HEC

## 2.6 Research Journals:

University of Engineering and Technology, Taxila issues a research journal titled ***Technical Journal of UET, Taxila*** on annual basis since 2007. The journal covers the main engineering disciplines Electrical, Mechanical, Mechatronics, Civil, computer, Software, Telecommunication, Environmental, Industrial Engineering and Applied Sciences.

The Editorial Board of the journal comprises of the following professionals:

### EDITORIAL BOARD

Peter Palensky  
Austrian Institute of Technology, Energy  
Department, 1210 Wien, Osterreich  
peter.palensky@ait.ac.at  
Patric Kleineidam  
Lahmeyer International GmbH

Abdul Sattar Shakir  
Faculty of Civil Engineering, UET  
Lahore  
shakir@uet.edu.pk  
Sarosh Hashmat Lodi  
Civil Engineering & Architecture, NED



Head of Department - Wind Energy,  
Friedberger  
Strasse 173, 61118 Bad Vilbel, Germany  
Patric.Kleineidam@de.lahmeyer.com  
Brian Norton  
Dublin Institute of Technology, Aungier Street  
Dublin2, Ireland  
president@dit.it  
Assefa M. Melesse  
Department of Earth and Environmental, ECS  
339  
Florida International University, Florida  
melessea@fiu.edu  
Jianzhong Zhang  
School of Science, Harbin Engineering  
University,  
Harbin, China  
zhangjianzhong@hrbeu.edu.cn  
Rodica Rameer  
Micro Electronics, School of Electrical  
Engineering & Telecommunication, University of  
New South Wales Sydney, Australia  
ror@unsw.edu.au  
Jun Chang  
School of Information Science and Engineering,

UET,  
Karachi  
sarosh.lodi@neduet.edu.pk  
Khanji Harijan  
Department of Mechanical  
Engineering,  
Mehran University of Engineering &  
Technology,  
Jamshoro.  
khanji1970@yahoo.com  
Iftikhar Hussain  
Industrial Engineering, UET Peshawar  
iftikhar@nwfpuet.edu.pk  
Ahsanullah Baloch  
Faculty of Engg. Science and  
Technology, ISRA  
Univ. Hyderabad  
csbaloch@yahoo.com  
Niaz Ahmad Akhtar  
UET Taxila  
vc@uettaxila.edu.pk  
Abdul Razzaq Ghumman  
Faculty of Civil & Environmental  
Engineering,  
UET Taxila  
abdul.razzaq@uettaxila.edu.pk  
Shahab Khushnood  
Faculty of Mechanical & Aeronautical  
Engineering, UET Taxila  
shahab.khushnood@uettaxila.edu.pk  
Mukhtar Hussain Sahir  
Faculty of Industrial Engineering, UET  
Taxila  
Mukhtar.sahir  
M. Shahid Khalil  
Faculty of Mechanical & Aeronautical  
Engineering, UET Taxila  
Saeed Ahmad  
Faculty of Civil Engineering,  
UET Taxila  
Mohammad Ahmad Ch.  
Faculty of Electronics & Electrical  
Engineering,  
UET Taxila  
dr.ahmad@uettaxila.edu.pk  
@uettaxila.edu.pk  
Adeel Akram  
Faculty of Telecom & Information



Shah Dong University, Jinan, China.  
changjun@sdu.edu.cn  
Haroon ur Rasheed  
PIEAS, P.O. Nilore, Islamabad  
haroon@pieas.edu.pk  
G. D. Peng  
School of Electrical Engineering &  
Telecommunication, University of New  
Southwales  
Sydney, Australia  
g.peng@unsw.edu.pk  
Abdul Ghafoor  
Department of Mechanical Engineering, NUST  
Campus, Islamabad  
principal@smme.nust.edu.pk  
M. Mazhar Saeed  
Research & Development,  
Higher Education Commission Pakistan  
mmazhar@hec.gov.pk  
Farrukh Kamran  
CASE, Islamabad  
farrukh@case.edu.pk

Engineering,  
UET Taxila  
adeel.akram@uettaxila.edu.pk  
Mumtaz Ahmad Kamal  
Faculty of Civil & Environmental  
Engineering,  
UET Taxila  
dr.kamal@uettaxila.edu.pk  
shahid.khalil@uettaxila.edu.pk  
& Environmental  
saeed.ahmad@uettaxila.edu.pk

## **2.7 Research Collaboration:**

### **2.7.1.1 Indigenous:**

Four in total.

### **2.7.1.2 Foreign Linkages:**

University of Engineering and Technology, Taxila has developed foreign linkages with international institutions to promote research activities at the campus. The institutions are:

- Seoul National University, Korea
- Aalborg University, Denmark
- Hohai University of Jiangsu, China
- University of Surrey, UK
- University of Hasselt, Belgium, UK
- Queen's University, Belfast, UK
- Dell
- HP
- Coca Cola
- Nokia

### **2.7.1.3 Funding Grants for R&D:**

Funding grants for the year 2013-14 is Rs. 9,999,680.

Research grant is used by the PhD/M.Sc. students under the supervision of supervisors which normally address the problems being faced by the Industry and propose the practical solutions/guidance.

- Faculty Project (Undergraduate): Rs. 3.2 Million
- Postgraduate Research Fund: Rs. 14.0 Million

#### **2.7.1.4 Operation of Office of Research, Innovation and Commercialization**

The office of the Research, Innovation and Commercialization (ORIC) is functioning under the Directorate of Advance Studies, Research & Technological Development.

The following projects have been executed:

- Short Term Load Forecasting for NTDC Network.
- Load Flow experience for NTDC Network.
- VAR control problem in 550/220 kV NTDC Network.
- Contingency Ranking for NTDC Network.
- Power Economic Dispatch using Hybrid Approach.
- Power Economic Dispatch using GA.
- Power Economic Dispatch using ANN
- PLC Based Control for Water Treatment Plant
- Frequency Control for Variable Speed Drives

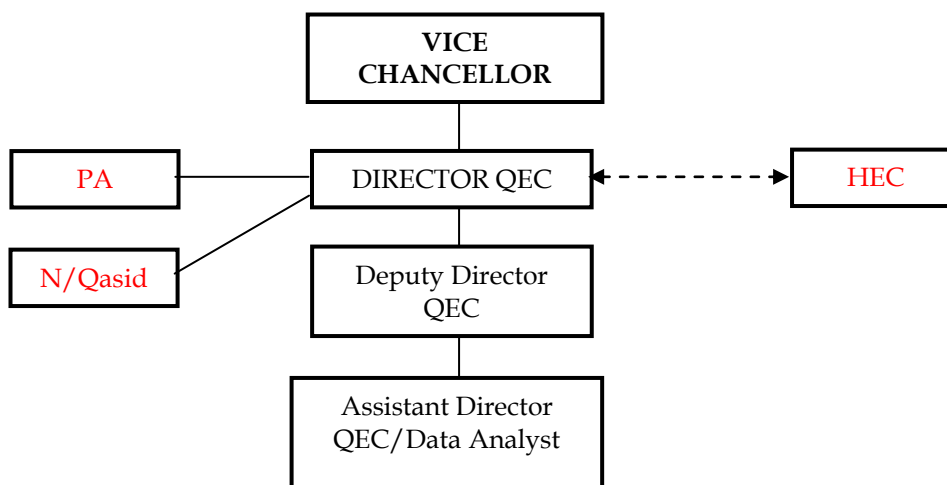
## Chapter 3

## Quality Assurance

It is observed that almost all the national universities, have similar scheme of studies for respective degree programs with minor variations, thanks to the information sharing in the age of IT. But the quality of outgoing graduates from these universities is conspicuously variant. We need to accept, that most of the universities here do not meet the international quality criteria. It is this dismal state of affairs, where most of our efforts needs to be focused. This is the only way to achieve value addition, international competitiveness and consequently, socio-economic up gradation. Seemingly, this idea became the founding stone of the Quality Assurance Agency (QAA), formed by the HEC. It has evolved well organized policies with quantifiable parameters of quality, required to enhance the educational standards in Higher Education. QAA is leading this movement for assuring and enhancing Quality of Higher Education in the country.

QAA, is guided and advised by the Quality Assurance Council for framing requisite policies and programs. Establishment of QEC's at all public Universities and Higher Education Institutions, is part of this process. QEC's at the Universities will be headed by professionals, equivalent to the status of a Dean, and will be directly responsible to the Vice-Chancellor. In Phase IV of this project, a QEC was established at UET TAXILA in Feb 2011.

### QEC ORGANOGRAM



### Functions of QEC

QEC be responsible for the following:

To promote public confidence that the quality and standards of the award of UET degrees are enhanced and safeguarded.

To review the quality standards, the quality of teaching and learning in each subject area.

For the review of academic affiliations with other institutions in terms of effective management of standards and quality of programs.

For defining clear and explicit standards as points of reference to the reviews to be carried out. It should also help the employees to know as to what they could expect from candidates.

To develop qualifications framework by setting out the attributes and abilities that can be expected from the holder of a qualification i.e. Bachelors, Bachelor with Honors, Master's, and Doctoral.

To develop program specifications. These are standard set of information clarifying what knowledge, understanding, skills and other attributes a student will have developed on successfully completing a specific program.

To develop quality assurance processes and methods of evaluation to affirm that the quality of provision and the standard of awards are being maintained and to foster curriculum, subject and staff development, together with research and other scholarly activities.

To ensure that the university's quality assurance procedures are designed to fit in with the arrangements in place nationally for maintaining and improving the quality of Higher Education.

Coordination with QAA of HEC for guidance and help on all matters related to Quality Assurance.

Capacity building of its team through HEC training programs.

To develop procedures for the following:

- Approval of new programs
- Annual monitoring and evaluation including program monitoring, faculty monitoring, and student's perception.
- Departmental review
- Student feedback
- Employer feedback
- Quality assurance of Master and doctoral degree programs
- Subject review
- Institutional assessment
- Program specifications

- Qualification framework

### **QEC Activities during 2013-14**

- QEC of UET Taxila has successfully conducted Inter-Departmental Academic Audit of 11 x Programs successfully. This has been a great learning experience for all of QEC members for improving our academic pursuit.
- 2<sup>nd</sup> Meeting of Phase IV QECs on 10<sup>th</sup> - 11<sup>th</sup> April 2012, at HEC Regional Center Lahore was attended by Director QEC.
- 3<sup>rd</sup> Meeting of Phase IV QECs held on 19<sup>th</sup> - 20<sup>th</sup> Sept 2012, at HEC Regional Center Peshawar was attended by Assistant Director.
- 4<sup>th</sup> Meeting of Phase IV QECs held on 3<sup>rd</sup>- 4<sup>th</sup> April 2013, at HEC Regional Center Peshawar was attended by Deputy Director QEC.
- One day Workshop on Quality Improvement Challenges in Educational Institutions conducted by PIQC Institute of Quality, Lahore held on 15<sup>th</sup> February 2013 was attended by Deputy Director QEC.
- Training Session on Self Assessment for Program Teams and Faculty of Sub-Campus Chakwal was conducted by QEC on 17<sup>th</sup> May 2012.
- One day 1<sup>st</sup> International Workshop on QS University Ranking held on 2<sup>nd</sup> May 2013 at Islamabad was attended by Director QEC and Deputy Director QEC.
- Two days Workshop on “Strengthening Programme Self-Assessment” held on 22<sup>nd</sup> and 23<sup>rd</sup> May 2013 at Islamabad conducted by HEC was attended by Director QEC.
- Homepage of QEC is being updated on monthly basis. Questionnaires for Teacher and Course Evaluation by Students have been placed at home page.

### **Impact of Quality Assurance in the University:**

Follow up action on the weaknesses identified through Self-Assessment of ten programs has been completed. 2<sup>nd</sup> Cycle of Self-Assessment process of 3x departments i.e. Civil, Mechanical and Electrical engineering is in progress. Self-assessment report of Electronics, Industrial and Environment Engineering is awaited from the respective departments. 2<sup>nd</sup> Cycle SAR of Computer, Telecom and Software Engg will be initiated 2<sup>nd</sup> Quarter of 2015. The continuous monitoring and evaluation of all the activities contributing directly or indirectly to academics will give impetus to the standard of education at UET. Furthermore, it will provide an opportunity to enhance student satisfaction, establish latest labs, improve university infrastructure and substantially increase research culture.

### **Quality Enhancement Cell:**

Mandate of QEC is to conduct Self-Assessment activities for the academic programs of UET in order to workout gaps and suggest improvements.

As per HEC guidelines Self-Assessment activity was conducted in 10 x programs in 1<sup>st</sup> Cycle and 3 programs in 2<sup>nd</sup> Cycle. 2<sup>nd</sup> Cycle SAR process will be initiated in 2<sup>nd</sup> Quarter of 2015 for three additional programs. Departmental Academic Audit of all the departments was undertaken and presented to Syndicate in 2012.

**Membership of Associations/Networks:**

QEC has obtained the Institutional Membership of Asia Pacific Quality Network (APQN).

**Accreditation of Programs from relevant Councils:**

All programs offered at UET, Taxila have been accredited by respective Accreditation Bodies.

## Chapter 4 Faculty Development

### 4.1 Faculty Development Programs (MS/PhD Local + Foreign):

All faculty members are encouraged to improve their professional qualifications. Currently most of the Faculty members are engaged in PhD research and many other PhD scholars from different professional organizations are enrolled in the University. For monitoring the progress of work, regular presentations are arranged during each month.

A stipend of Rs.15, 000/- is being paid to Full-Time MSc Scholars for a period of 18 months research. The University continuously endeavors to increase the number of MSc and PhD produced per year.

### 4.2 Returned Scholars:

S. no.	Department	Scholar's Name
1.	Electrical Engg	a. Dr. Inaam ul Hassan Sheikh b. Dr. Ahsan Ali c. Dr. Obaidullah
2.	Civil Engg	Nos.
3.	Mechanical Engg	a. Dr. Waseem Ahmad b. Dr. Salman Hussain c. Dr. Hafiz Muhammad Ali
4.	Computer Engg	03 Nos.
5.	Software Engg	a. Engr Mustansar Ali Ghazanfar b. Engr Tasawer Khan
6.	Telecom Engg	a. Dr. Engr. Rashid Saleem b. Dr. Engr. Rameez Asif c. Dr. Yaser Amim
7.	Industrial Engg	Nos

### 4.3 Present Scholars:

S. No.	Department	Scholar's Name
1.	Electrical Engg	a. Engr. Junaid Mir b. Engr. Tahir Muhammad c. Engr. Raja Abdullah d. Engr. Moazzam Azeem e. Engr. Intisar Ali Sajjad f. Engr. Azhar Ali Zaidi g. Engr. Syed Bilal h. Engr. Saif Siddique Butt i. Engr. Ayesha Ejaz
2.	Civil Engg	a. Engr. Qudeer Hussain b. Engr. Irshad Qureshi c. Engr. Naveed Ahmad d. Engr. Shahzad saleem e. Engr. Syed Bilal Ahmad Zaidi

		f. Engr. Afaq Ahmad g. Engr. Ghufraan Ahmad Pasha
3.	Mechanical Engg	a. Engr Ehtasham ul Haq b. Engr. Rana Atta ur Rehman
4.	Computer Engg	07 Nos.
5.	Software Engg	a. Huma Ayub b. Engr Saima Zareen c. Engr Mubashir Ayub d. Engr Ali Javeed e. Engr Fahad Khan
6.	Telecom Engg	a. Engr. Humayun Shahid b. Engr. Ali Riaz
7.	Industrial Engg	a. Engr. Jaji Bahadar b. Engr. Abid Ali c. Engr. Jawad

#### 4.4 Pre-Service and In-Service Professional Development Programs:

The detail of teachers who attended the professional development program arranged by HEC and University is given in the following table.

Faculty Member	Training Program	Venue
Prof. Dr. Gulistan Raja	Outcome based Assessment System of Accreditation and Education	PEC Islamabad
	Leadership for Engineers and Technical Managers	PEC Islamabad
	Public Procurement Rules and Procedures	NIP Islamabad
	Advance GSM Equipment	UET, Lahore
Dr. Tahir Mahmood	Smart Grid (Intelligent Energy Management)	PEC Islamabad
	Leadership for Engineers and Technical Managers	FUUAST, Islamabad
Dr. Sarmad Sohaib	Teaching the Teachers	LUMS, Lahore
	International Conference on Communication	Japan
Engr. Ilyas Ahmed	Smart Grid (Intelligent Energy Management)	FUUAST, Islamabad
	Developing a Researcher	BNU, Lahore
Engr. Hafiz Irfan Arshad	Qualitative Analysis using SPSS	UMT Lahore
	Developing Literature Review	COMSATS, Lahore
Engr. Sh. Saaqib Haroon	Qualitative Analysis using SPSS	UMT Lahore
	Developing Literature Review	COMSATS, Lahore
Engr. Tahir Muhammad	Qualitative Analysis using SPSS	UMT Lahore
Engr. Junaid Mir	PCEPT	UET Taxila
Engr. Mamoona Khalid	PCEPT	UET Taxila
Engr. Munira Batool	PCEPT	UET Taxila
Engr. Mehroz Iqbal	Teaching the Teachers	LUMS, Lahore



## 4.5 Achievements of Foreign Faculty

### Four Days Workshop on Wireless Communication

The Department of Electrical Engineering, UET Taxila, in collaboration with the Higher Education Commission, Pakistan organized a four days workshop on the theme “Teaching the teachers: Wireless Communications”.

Dr. Ali Imran from The University of Surrey delivered the workshop. During this workshop condensed course on fundamentals and advances in Wireless Communication was delivered. This workshop was specifically designed for teachers of advance undergraduate and postgraduate courses in wireless communication. Its purpose was to introduce a new teaching method for the subject. Dr. Sarmad Sohaib, Assistant Professor, Electrical Engineering Department was the convener of the workshop. 32 faculty members from various universities of Rawalpindi and Islamabad attended the four days workshop.

### USAID Organized a Seminar on Energy Crises of Pakistan.

USAID energy policy wing organized interactive awareness seminar energy crises of Pakistan 8<sup>th</sup> on Nov 2012.



### CPD Seminar Organized by PEC:

Pakistan Engineering Council organized a seminar on Nov 13<sup>th</sup> 2012 on CPD activities for Engineers.



#### **4.5 Achievements of Foreign Faculty:**

The Foreign Faculty was hired in past but currently no foreign faculty member is hired.

## Chapter 5 Access

### 5.1 Basic Enrolment:

- Undergraduate Level = 3909
- Postgraduate Level = 864
- Doctoral Level = 121

### 5.2 Equity:

- Equal approach provided in Province of Punjab irrespective of gender.
- For other provinces there are quota seats.

### 5.3 Gender-wise Detail:

#### Undergraduate Level

- Male = 3385
- Female = 524

#### Postgraduate Level

- Male = 726
- Female = 138

#### Doctoral Level

- Male = 115
- Female = 6

### 5.4 Employability:

95% approx

### 5.5 Faculty-Students Ratio:

- |                                     |      |
|-------------------------------------|------|
| a. Civil Engineering                | 1:31 |
| b. Electrical Engineering           | 1:37 |
| c. Mechanical Engineering           | 1:40 |
| d. Computer Engineering             | 1:18 |
| e. Software Engineering             | 1:29 |
| f. Telecom Engineering              | 1:31 |
| g. Electronic Engineering Taxila    | 1:21 |
| h. Environmental Engineering        | 1:22 |
| i. Industrial Engineering           | 1:17 |
| j. Electronics Engineering Chakwal  | 1:21 |
| k. Mechatronics Engineering Chakwal | 1:25 |

## Chapter 6 University Building Economies

### 6.1 University-Industry Linkage:

Annual Industry-Academia Linkage meeting was held in the Multi purposes Hall of the University. In this meeting the following topics were discussed in detail;

- Industrial Professorship
- Student Support Fund
- Alumni Support for Engineering Complex
- Memorandum of Understanding (MoU)

The MoU signed between the following Industries and UET, Taxila:

- International Tubular Services Ltd., Islamabad
- DELL Global B.V., Islamabad
- Coca-Cola CCBPL, Islamabad
- ASM Solutions, Islamabad
- Karachi Tools, Dies and Modules Center, Karachi

### 6.2 New Initiatives:

The following persons from the leading industries were appointed as Industry Professor, Assistant Professor and Industry ACE etc in the following faculties of the University:

Department	Name	Organization	Designation
Faculty of C&EE	1. Dr. Ishtiaq Hassan	NESPAK	Assistant Industry Professor
	2. Dr. Majid Ali	NESPAK	Assistant Industry Professor
	3. Dr. Munir Ahmad	NHA	Assistant Industry Professor
	4. Dr. Shafeeq Ahmad	NHA	Assistant Industry Professor
	5. Dr. Asim Inam	NESPAK	Assistant Industry Professor
	6. Dr. Shahab Khanzada		Industry Professor
	7. Mr. Abdul Qadeer		Assistant Industry Professor ACE
Faculty of M&AE	Dr. Zaffar M. Khan	NESPAK	Industry Professor
Faculty of T&IE	1. Dr. Aleem Mirza	AWC	Assistant Industry Professor
	2. Dr. Raees Ahmad Siddiqui	NESCOM	Assistant Industry Professor
	3. Dr. Mureed Hussain	YES, Isd	Assistant Industry Professor
	4. Dr. Waseem Amir Maan	NAYATEL, Isd.	Assistant Industry Professor
	5. Mr. Wahaj-us-Siraj		Assistant Industry Professor ACE

### 6.3 Technology Incubation Centre:

Gradually setting up of Incubation center for all departments within five years

and will help about 20% pass outs for their self-employment in next 5 year plan

#### **6.4 Patents:**

In progress.

#### **6.5 Internship and Placement Office:**

We are sending our students regularly in various reputable national and multinational organizations for internship and placement.

UET Taxila Holds the Third Industry-Academia Linkage meeting on 29th Feb 2012



CEO Talk was organized by coordination and training organizing committee on May 22<sup>nd</sup> 2012 for the sharing of ideas b/w industry and academia.



#### **6.6 Student Counseling and Career Guidance**

We have also made arrangements for providing career counseling and guidance to the students.

## Chapter 7 Strengthening Physical Infrastructure

### 7.1 Development Projects (Laboratories, Libraries, etc):

The department of Electrical Engineering has following well equipped laboratories:

1. Basic Electrical Engineering Lab.
2. Computer Lab.
3. Computer Simulation Lab.
4. Digital Systems Lab.
5. Electrical Machines Lab.
6. Electronics Lab.
7. Microwave & Communication Lab.
8. Multimedia & Vision Lab.
9. Optoelectronics Lab.
10. Power Systems Lab.
11. Workshop & Projects Lab.
12. Power Electronics Lab.
13. Instrumentation and Measurement Lab.
14. Disposal System and four water Filtration plants.

The Electrical Department also shares the following Labs. of other departments:

S. No.	Department	Laboratories
1.	Electronics Department	1. ASIC Design & DSP Lab. 2. Control Lab
2.	Civil Engineering Department	Hydraulics Lab.
3.	Mechanical Engineering Department	1. Thermo Lab. 2. Fluid Lab.
4.	Computer Engineering Department	Multimedia & Vision Lab.

### Up-gradation of Labs.

The following laboratories have been upgraded under the project “Up-gradation of Various Labs. of EED with the cost of Rs. 37.43 Million. Rs. 34.779 Million has been utilized for Up-gradation of the following labs and the remaining balance is 2.651 Million.

S. No.	Name of the Laboratories
1.	Basic Electrical Engineering
2.	Power Systems Lab
3.	Microwave & Communication Lab.
4.	Digital Systems Lab.
5.	Opto-Electronics Lab.
6.	Power Electronics Lab

## Main Library

The main library has large numbers of books on Electrical Engineering and also there is a well-managed book bank in the university which offers academic books at fairly low price.

### 7.2.2 Departmental Library

Books for faculty members and students are readily available in the main library. However, Journals, Manuals, Codes relevant to Electrical Engineering are also stacked in the departmental Library. One faculty member and one staff member and library attendant is responsible for ensuring the proper function of the departmental library.

### 7.2.3 Budget

The main library has the following budget:

Library Sections	Title		Details/ Description
LIBRARY BUDGET FOR THE FY 2014-15	Total Budget for FY 2014-15 to purchase of books and newspapers/ periodicals etc.		PKR. 5.3 millions.
	Balanced Amount in the Budget to be Utilized (Approximate)		PKR. 0.74 millions
	Books Purchased in FY 2014-15 (Library) till 30 <sup>th</sup> April 2015		250
	Books Purchased in FY 2014-15 (Book Bank) till 30 <sup>th</sup> April 2015		186
	Total Books Purchased in FY 2014-15 till 30 <sup>th</sup> April 2015		436
LIBRARY RESOURCES	Total Books Accessioned		64754
	Library (Reference & Circulation)	Books Accessioned	26855
	Book Bank	Books Accessioned	30646
	Donations	Books Accessioned	7253
	Journals	Periodicals / Journals (subscribed)	13 titles

		Periodicals / Journals (Donations)	More than 35 titles
	<b>Thesis</b>	Dissertations/ Thesis	More than 3000
<b>DIGITAL LIBRARY</b>	<b>Digital Library: provided by HEC through PERN project (Accessible Resources)</b>	<b>ebrary</b>	More than 40,000 e-books and 23,000 e-journals of over 220 international publishers are available at ebrary. These contents are freely available to library users within the university premises round the clock.
		<b>IEL</b>	IEL (IEEE and IEE) resources.
		<b>Access Medicine</b>	Access Medicine
		<b>ASME</b>	American Society of Mechanical Engineering.
		<b>ASCE</b>	American Society of Civil Engineering.
		<b>ACM</b>	Association of Computing Machinery.
		<b>PALGRAVE</b>	Palgrave Macmillan
		<b>RSC</b>	Royal Society of Chemistry.
		<b>BENTHAM SCIENCE</b>	Bentham Science
		<b>ACS</b>	American Chemical Society
		<b>AMS</b>	American Mathematical Society
		<b>AIP</b>	American Institute of Physics
		<b>APS</b>	American Physical Society
		<b>T&amp;F JOURNALS</b>	Taylor & Francis Journals
		<b>SPRINGERLINK</b>	Springer Link
		<b>BLACKWELL</b>	Blackwell Synergy
		<b>OUP</b>	Oxford University Press
		<b>JSTORE</b>	JStore
		<b>SCIENCE DIRECT</b>	Science Direct
		<b>SCIENCE ONLINE</b>	Science Online
	<b>NATURE</b>	Nature: International Weekly Journal of Science	
	<b>ASM</b>	American Society of Microbiology	
	<b>Digital Library: provided by HEC through PERN project (Resources Which are not Accessible)</b>	<b>MIT OCW</b>	Massachusetts institute of technology Open Course Ware
		<b>SCOPUS</b>	Scopus abstract and indexing database
		<b>Engineering Library</b>	Engineering library
		<b>ISIWEB</b>	ISI Web of knowledge
		<b>EBSCOHOST</b>	Ebscohost



		<b>Academic search Premier</b>	Academic Search Premier
		<b>Business source premier</b>	Business source premier
		<b>MARYANNLIEBERT</b>	Mary Ann Liebert
	<b>Research Articles for Faculty</b>		Central Library facilitates its faculty and researchers in acquiring research articles which are not available freely from British Library Document Delivery Service through HEC.
	<b>CDs/ DVDs Writing Facility</b>		CD/ DVD writing facility is available for library users.
<b>VIDEO CONFERENCING FACILITY</b>	<b>Services</b>		Video conferencing facility is available in accreditation with HEC. This facility is used to bring people at different sites together for a meeting. This can be as simple as a conversation between two people in private offices (point-to-point) or involve several sites (multi-point) with more than one person in Videoconferencing Hall at different sites. Besides the audio and visual transmission of meeting activities, videoconferencing can be used to share documents, computer-displayed information, and whiteboards.

## 7.2 Research Equipment:

Every student has full access to the laboratory equipment. A hand on approach is strictly practiced in the department. Each equipment is normally used by a group of 3-4 students. Students are given full access to the equipment under the guidance of laboratory staff. The equipment is fully utilized during the working hours of the University.

In the following laboratories of the department M.Sc./PhD level research is conducted:

1. Digital Systems Lab.
2. Microwave & Communication Lab.
3. Optoelectronics Lab.
4. Power Systems Lab.

## 7.3 Construction Projects:

- A. Abu Bakar Hostel (Capacity 400 Boys)
- B. Class Rooms and Laboratories for Industrial Engineering Department.
- C. Construction of Boundary Wall at Pind Dadan Campus.
- D. Academic Block at Chakwal Campus
- E. **Water Works Project is in pipeline at UET, Taxila**

Presently the University is getting a supply of water from Khanpur Dam reservoir, through Left Bank Canal, upto an average of two cusec, on specified payment.

Presently this supply is being used for horticultural purposes in the campus.

The situation deserves an immediate need to turn this supply into portable water. In this regard, the following works are under progress:

- a.** Filtration plant of discharge capacity 800 to 1000 gallon per minute i/c filtration plant room and all electric works are near completion.
- b.** Two underground reservoirs, each of 100000 gallons capacity (one for raw water and one for filtered water), overhead water tank 100000 gallons capacity, Allied services like pumping units, retaining and boundary walls etc are in progress.

## Chapter 8 Strengthening Technical Infrastructure

### Digital Library:

Through the link given <http://digitallibrary.uettaxila.edu.pk/> resources of digital library can be accessed.

**Over 220 leading international publishers are participating in E-library including the following:**

- i. Blackwell Synergy
- ii. BMJ Publishing Group
- iii. Cambridge University Press
- iv. Emerald
- v. Jhon Wiley & Sons
- vi. The McGraw Hill Book Companies
- vii. MIT Press
- viii. Springer Publishing Company
- ix. Stanford University Press
- x. Sybex Inc.
- xi. United Nations University Press etc.

Following Web links are also very effective in this regard:

<http://site.ebrary.com/lib/taxila>  
<http://web.hec.gov.pk>  
<http://www.scopus.com/scopus/home.url>  
<http://www.ieee.org/ieeexplore>  
[www.digitalengineeringlibrary.com](http://www.digitalengineeringlibrary.com)  
[www.accessscience.com](http://www.accessscience.com)  
<http://www.asme.org/>  
<http://www.asce.org/>  
<http://acm.org/pubs>  
<http://www.palgrave-journals.com/pal/>  
<http://www.isiknowledge.com>  
<http://www.isiknowledge.com>  
<http://www.bentham.org>  
<http://pubs.acs.org/>  
<http://www.ams.org/journals/>  
<http://journals.aip.org/>  
<http://publish.aps.org/>  
<http://www.appt.org/>

### Utilization record of these resources

**300** students of M.Sc, PhD and faculty of the university are using these resources.

### UET publications in ISI Indexed journals



7	Heat and Mass Transfer	-do-
8	Journal of Fluid Mechanics	-do-
9	European Journal of Industrial Engineering	Ind. Engg.
10	IEEE Journal on Selected Areas in Communications	Telecom.Engg
11	IEEE Transactions on Antennas and Propagation	-do-
12	IEEE Transactions on Wireless Communications	-do-

Capacity building / trainings on the use of digital library

Training Programs are schedule to be started from **Oct. 2013**

### **Video Conference Component of UET Taxila**



#### **Video Conference Sessions conducted during the reported period**

- i. Cyber Security awareness Seminar on 14/03/2013
- ii. HEC Business Plan meeting attended by Honorable Vice chancellor Dr.Muhammad Abbas Choudhary on 7/3/2013
- iii. Microsoft Visual Studio Session on 26/3/2013
- iv. HEC Tanning for video conference on 13/08/2012
- v.

#### **PERN:**

PERN (Pakistan Education & Research Network) has **64 Mbps** internet link from Higher Education Commission.

#### **Web Portal**

<http://Library.uettaxila.edu.pk/library/lib/library/library.asp>

<http://169.254.1.9/library/lib/library/library.asp> is functional.

#### **Development of online Admission System**

<http://web.uettaxila.edu.pk/uet/admissions.untanglesolutions.com> is functional.

## **Chapter 9 Universities Building Communities**

### **9.1 University-Community Interaction:**

#### **University's Role in Building Community:**

### **9.2 Alumni Affairs: Outstanding Achievements etc:**

Annual meetings are being conducted and Alumni are contributing their rules for the betterment of the University with their good suggestions. The detail of registered Alumni with the University is given below:

- a. Civil Engineering = 492
- b. Electrical Engineering = 572
- c. Mechanical Engineering = 452
- d. Computer Engineering = 239
- e. Software Engineering = 85
- f. Telecom Engineering = 10

## Chapter 10 Sports

### Inter-Departmental Sports:

The Directorate of Sports has organized inter-departmental sports including the following:

Cricket, Hockey, Badminton, Football, Tug of War, Table Tennis, Chess, Snooker, Fustal, Athletics (Running and Throwing)

### Inter-University Championships:

The University participated in 15 to 20 events in Inter-University Championships for the period of 2013-2014 as per Sports schedule duly notified by the Higher Education Commission.

### The Football League 2014

The Soft desk Society in Software Engineering Department UET, Taxila hosted a "FootballTournament" from 11th to 13th February, 2014. This event was organized by Softdesk society of UET Taxila.



The University Organize the Annual Sports Gala event every Year. Students attended Gymnasium and other Sports facilities like Football, Cricket, Hockey, Table Tennis and Badminton etc on daily basis in morning and evening.

#### 10.1 Achievements at National Level:

UET Taxila has won one Gold medal and two bronze medal in swimming event in Punjab yOuth Festival 2014.

#### 10.2 Incentives and Honors/Awards for Sports persons:

The University awarded Certificates / Trophies / Shields to the players which participated/ got positions in any sports event organized by the Directorate of Sports of UET Taxila.

## Chapter 11 Universities Building Leadership

### 11.1 Faculty Leadership (Awards and representation in Govt policy making Committees, Memberships on various Councils etc):

Represents at HEC, PEC and other Government Policy making Committees/membership of IEEE.

Name of Faculty Members	Title of Membership of Council
Prof. Dr. Qaiser uz Zaman Khan	Member of Pakistan Engineering Council Member of Institution of Engineers
Dr. Liaqat Ali Qureshi	American Concrete Institute Pakistan Engineering Council
Dr. Imran Hafeez	Pakistan Engineering Council Member, Pakistan Engineering Congress
Muhammad Ali Shamim	Member, The Chartered Institute of Highways & Transportation (CIHT), UK International Association of Hydrological Sciences
Dr. Naveed Ahmad	Member Pakistan Engineering Council (PEC) Member RILEM (International Union of Laboratories and Experts in Construction Materials, Systems and Structures)

### 11.2 Student Leadership (Co-Curricular Activities: University Dramas, Exhibitions, Expos, Competitions, Debates at National and International Levels):

Student week celebrated at UET from April 22 to 26 2013. Different competitions were organized between students and prizes distributed to winners . All the students and faculty fully participated in this activity





## Chapter 12 Finance

### 12.1 Annual Statement of Accounts:

Available at Appendix-A

### 12.2 Financial Year at a Glance:

S. No.	Head of Accounts	Actual 2011-2012	Actual 2012-2013	Budget Estimate 2013-14
<b>A: RECEIPTS</b>				
1.	Opening Balance	133.687	166.124	138.450
2.	Government Grant	349.053	454.109	522.225
3.	Supplementary Grant	13.376	23.093	--
4.	Grant for Tenure Track	31.698	24.042	30.000
5.	University's Own Resources	232.732	292.941	303.860
	<b>Total Receipts (A)</b>	<b>760.546</b>	<b>961.309</b>	<b>994.535</b>
<b>B: EXPENDITURES</b>				
1.	Pay	205.654	219.574	282.611
2.	Regular Allowances	103.005	146.369	241.367
3.	Other Allowances	26.624	1.442	0.636
4.	Other Charges	267.559	25.283	35.850
5.	Provision for Temporary Posts	1.030	339.144	434.071
	<b>Total Expenditures (B)</b>	<b>603.872</b>	<b>731.812</b>	<b>994.535</b>

### 12.3 Audit Report:

The Audit of Accounts for the year 2012-13 has not been conducted by the External Auditor so far. Recurring

### 12.4 Development Budget:

S. No.	Head of the Project (Project Funded by the Federal Government)	Approved Capital Cost	Receipts 202-13	Budget Estimate 2013-14
1.	Provision of Basic Infrastructure and Establishment of Telecom Engg Deptt	471.672		57.204
2.	Establishment of Fracture Mechanics and Fatigue Lab in the Mech Engg Deptt	37.668		1.624
3.	Strengthening of Research Laboratory of Hydraulics and Water Resources in Civil Engg Deptt	38.500		0.467
4.	Up-gradation of Lab Equipment in various Laboratories of Elect Engg	37.430		2.651

	Deptt			
5.	Feasibility Study of Gandhara College of Architecture at UET, Taxila	5.200		1.749
6.	Establishment of Renewable Energy Research and Development Center	38.804		3.083
7.	Sewerage Disposal System and Water Filtration Plant 04 Nos.	30.900		26.900
8.	Establishment of Quality Enhancement Cell	2.138		0.255
9.	Extension in Academic Block of Elect, Civil & Mech Departments	37.054		27.054
10.	Strengthening & Up-gradation of UET, Taxila & its Sub Campus	785.307		233.000
	<b>Total</b>	<b>1484.673</b>		<b>353.987</b>

### 12.5 Recurring Budget:

S. No.	Head of Accounts	Budget Estimate 2013-14
<b>A:</b>	<b>R E C E I P T S</b>	
1.	Opening Balance	138.450
2.	Government Grant	522.225
3.	Supplementary Grant	--
4.	Grant for Tenure Track	30.000
5.	University's Own Resources	303.860
	<b>Total Receipts:</b>	<b>994.535</b>
<b>B:</b>	<b>E X P E N D I T U R E S</b>	
1.	Pay	282.611
2.	Regular Allowances	241.367
3.	Other Allowances	0.636
4.	Other Charges	35.850
5.	Provision for Temporary Posts	434.071
	<b>Total Expenditures:</b>	<b>994.535</b>

### 12.6 Self-generated Income:

3030.860 Million (Budgeted)

### 12.7 SAP related Activities:

SAP system is not in practice but UET has plan to adopt this system for more effective accounting operations.

### 12.8 Trend of per Student spending:

Period	Per Student Cost
2010-11	Rs.114,424/-
2011-12	Rs.134,015/-
2012-13	Rs.149,534/-

## **Chapter 13 University Governance**

### **13.1 Syndicate meetings:**

The five meetings of the Syndicate conducted in the Year 2013-14.

### **13.2 Academic Council meetings:**

Four meetings of the Academic Council conducted in the Year 2013-15.

### **13.3 Board of Advanced, Studies meetings:**

The three meetings of the Board of ASR&TD conducted in the Year 2013-14.



**Academic Council Meeting March 19, 2015**

## Chapter 14 Office of Resource Generation/Development

### 14.1 Initiatives and Implementation:

UET Taxila providing consultancy services and Lab Test facilities to different stakeholders. Various collaborations have been developed with renowned organizations for the empowerment of University.

### 14.2 Future Plans:

S. No.	Project Title	Total Cost (in Millions)
1.	Establishment of Sub Campus of UET, Taxila at Balkassar, Distt Chakwal	Rs.871.328
2.	Establishment of Sub Campus of UET, Taxila at Pind Dadan Khan, Distt Jhelum	Rs.811.124

Vice Chancellors visited UET Taxila Chakwal Campus for the inauguration of academic block of the Campus.



## Chapter 15 Health Centre/Medical Facilities

The Medical center of university is fully equipped for all sort of emergencies and first aid for the employees and students. Vaccinations, anti-malarial and anti-dengue medicines are administered fro time as per need.

Hygiene of students and staff members was looked into and all measures against dengue fever were taken by the medical center in the year 2012.

Purchase of medicines was done and only stat dose were administered at the clinic.

The record of consumption and dispense of medication was entered in record keeping registers. Yearly audit of clinic was done by internal and external audit committees.

Activities regarding health awareness programmes are planned to be arranged in collaboration with world renowned organizations at regular intervals. Following facilitation services are available for the employees and students of UET.

- i. Students of UET are provided free consultation by the Medical Officer.
- ii. Two ambulances are now available for emergency cases.
- iii. Medical Officers and Paramedical staff are available 24 hours for 07 days, even on gazette holidays.
- iv. Dental treatment facilities are available.
- v. Medicines are available for students and first aid treatment for employees.
- vi. Regular insecticide spray for mosquitoes.
- vii. Students are encouraged for charity work such as blood donation.
- viii. Medicines are provided to students going on educational trips.
- ix. Students are discouraged from smoking.
- x. Rashid Cheema Blood Donor Society is regularly arranging blood donation camps for the benefit of society.
- xi. Following vaccines for immediate treatment are also available:





- a. Tetanus
- b. Dog bite
- c. Snake bite

