Annual Progress Report 2024-2025

Department of Electronics Engineering

University of Engineering & Technology, Taxila

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University Mission

To fulfill the needs of the Country by producing responsible graduates equipped with sound knowledge and skills along with highest moral values through conducive, learning environment

University Vision

To be a quality conscious institution of international standing imparting knowledge in the field of engineering and emerging technologies in a caring environment for the socioeconomic development of the Country

University Core Values

- *Merit*
- *Honesty*
- *Fair play*
- *Teamwork*
- *Transparency*
- *Accountability*
- *Justice*
- *Implementation of Rule of Law*

DEPARTMENT OF ELECTRONICS ENGINEEING

1. Introduction

The Eelectronics Engineering has been, and continues to be, one of the most challenging and, at the same time, rewarding professions of modern society. Electronics Engineers continue to provide both technology and technological leadership for developments in numerous fields including semiconductors, nanotechnology, computers, telecommunications, and energy conservation. In addition, Electronics Engineers are being challenged to supply technical expertise to support advances in many other fields such as energy management, transportation systems, health care delivery, and public policymaking.

The Department of Electronics Engineering (ENCD) at UET, Taxila was established in 2010 to fulfill the needs of the country by producing responsible graduates equipped with sound knowledge and skills along with highest moral values through conducive, learning environment. The department is situated on the 2nd floor of Combined Academic Block beside the administration block of UET, Taxila.

Since its inception, the Department has been active in recruiting outstanding new faculty members to support its teaching and research activities and we continuously add significantly to this faculty base. Our young faculty members have tremendous potential to change the traditional way of thinking about engineering education, pedagogy and research excellence. The Department strives for continuous improvement, and we continue to update the Department's undergraduate and postgraduate curricula to better meet the needs of today's students and tomorrow's practicing engineers, as well as for students who want a strong technical background.

2. Undergraduate Program

The Department offers Electronics Engineering degree programs at undergraduate and graduate level. Currently, undergraduate program in "Bachelor of Science in Electronics Engineering" is accredited with Pakistan Engineering Council (PEC) at Level-II (i.e. OBE based) and postgraduate program is approved and registered with Higher Education Commission (HEC). The current enrollment of undergraduate students is 50 per year.

The students are provided with an educational foundation that prepares them to choose their carrier in Academic, Industrial or other areas. Students of the department often participate and win multiple national competitions related to technical and co-curricular activities that depict the strength of our program.

2.1 PEC Undergraduate Program Accreditation Status

Once the program started running smoothly and it was felt that the program fulfills the PEC accreditation requirements, the Department applied for accreditation of BSc Electronics Engineering for its first session of 2010 to Pakistan Engineering Council in 2014. Consequently, said session was accredited by PEC. Since then, thirteen batches i.e., sessions 2010-2022 of Electronics Engineering are duly accredited by PEC.

*The PEC Re-Accreditation team comprehensively reviewed the undergraduate program of Electronics Engineering at UET, Taxila on 31-05-2024 and 01-06-2024. The team was overall well-satisfied and accredited the program under OBA Level-II of three sessions (*2K20, 2K21 & 2K22).

The accreditation history of BSc. Electronics Engineering Program is given in Table 1.

Table 1 History of PEC Accreditation Status of BSc Electronics Engineering Program

Sr. No.	Session	Status	PEC Notification No.
1	2K10 Session (1st Session)	Accredited	PEC/AD/UET-T/CL-70/2014 Dated: 24-10-2014
2	2K11 & 2K12 Sessions (2nd and 3rd Sessions)	Accredited	PEC/AD/UET-T/DL-73(EAB)/2015 Dated: 20-08-2015
3	2K13 & 2K14 Sessions (4th and 5th Session)	Accredited	PEC/AD/UET-T/DL-83(OBA)/2017 Dated: 08-11-2017
4	2K15 & 2K16 (6th and 7th Sessions)	Accredited *under Level-II (OBA)*	PEC/AD/UET-T/DL-87(OBA)/2018 Dated: 17-08-2018
5	2K17, 2K18 & 2K19 (8th , 9th and 10th Sessions)	Accredited *under Level-II (OBA)*	PEC/AD/UET-T/DL-103/2021 Dated: 28-10-2021
6	2K20, 2K21 & 2K22 (11th , 12th and 13th Sessions)	Accredited *under Level-II (OBA)*	PEC/EAD/UET-Taxila/DL (115th)/26 Dated: 03-09-2024

2.2 Program Mission Statement

Provide quality education in Electronics Engineering imparting sound engineering knowledge and skills in order to fulfill the demands of industry and services sector.

2.3 Program Educational Objectives

The broad objectives of the undergraduate program in Electronics Engineering are to instill in its graduates a solid foundation of mathematical, scientific and engineering knowledge in addition to developing the intellectual skills essential for prosperity and success in their careers.

The PEOs of Electronics Engineering Program are given below. These PEOs are evaluated and reviewed on regular basis after 5 years of the graduation of each Session.

PEO-1: Proficiency in engineering knowledge and tools for the design, analysis and evaluation of complex engineering problems.

PEO-2: Enhance their knowledge and skills while providing effective solutions keeping in view the environmental and societal aspects.

PEO-3: Contribute as a team member or manager, demonstrating professionalism.

2.4 Faculty Profile

The faculty strength, qualifications, level of competencies, commitment and attitude is playing a vital role in the accomplishment of program objectives and outcomes. Most of it is dependent upon the recruitment process, incentives, faculty development program and workload of the faculty.

The faculty at the Department of Electronics Engineering demonstrates complete familiarity with OBE approach. They have the ability and authority required to ensure proper conduct of the program, develop/implement processes for evaluation, assessment and Continuous Quality Improvement (CQI). Familiarity of faculty with the program objectives and outcomes, understanding of the outcome-based assessment cycle, and enthusiasm for developing more effective programs have served as the key elements to ensure attainment of program objectives.

Currently, there are ten (10) full-time faculty members (2) two lab. engineers are serving at the department. The faculty details are shown in Table 2.

Table 2 List of ENCD Faculty Members

Sr.No.	Name	Qualification	Designation
1	Prof. Dr. Gulistan Raja	PhD.	Professor Dean, FE&EE
2	Prof. Dr. Yaseer Arafat Durrani	PhD.	Professor Chairman
3	Dr. Syed Azhar Ali Zaidi	PhD.	Assistant Professor
4	Dr. Khawaja Shafiq Haider	PhD.	Assistant Professor
5	Dr. Bilal Aslam	PhD.	Assistant Professor
6	Dr. Hammad Zaki	PhD.	Assistant Professor
7	Dr. Adil Usman	PhD.	Lecturer
8	Dr. Zohaib Hassan Naqvi	PhD.	Lecturer
9	Dr. Muhammad Faraz	PhD.	Lecturer
10	Dr. Sajjad Ahmed	PhD.	Lecturer
11	Engr. Tahir Iqbal	MSc.	Lecturer
12	Engr. M. Atif Imtiaz*	MSc.	Lecturer
13	Engr. M. Tahir Khan	MSc.	Lab Engineers
14	Engr. Shujaat Hussain	BSc.	Lab Engineers
15	Engr. M. Umar Khan*	MSc.	Lab Engineers
16	Engr. Sumair Aziz*	MSc.	Lab Engineers
17	Engr. Misbah Younus*	MSc.	Lab Engineers

*(Study Leave Abroad)

2.5 Program Structure and Curriculum Development

The focus of the BSc. Electronics Engineering program is on the design, analysis and solution of complex engineering systems. The curriculum is designed to achieve the required Cognitive, Psychomotor and Affective domain levels associated with each course. Students are imparted knowledge, skills and experience in the primary areas of the Electronics and the secondary areas in

Control Systems, Artificial Intelligence/Machine Learning, Communication Systems, Signal/Image Processing etc. to meet the demands of national and international market. The department is very much committed to uphold the high-quality standards of education. As per HEC/PEC guidelines the curriculum for the undergraduate program has been revised many times to improve the quality of the learning process as shown in table 3.

Table 3 History of the Revised Curriculum

Sr. No.	Year
1	2010
2	2014
3	2017
4	2018
5	2020
6	2023

The revised curriculum in 2023 has been approved by the IAB/BoUGS/BoF and Academic Council and implemented on 2K23 Session and onwards. The details of the revised curriculum are shown in Table 4.

Table 4 Revised Curriculum Design as per HEC/PEC guidelines

Domain	Knowledge Area	PEC/HEC Recommended		Institute's Program Breakup	
		Total Credits	Overall %	Total Credits	Overall %
Non-Engineering	Humanities	19	30-31	16	30-31
	Management Sciences	6		6	
	Natural Sciences	16		19	
	Sub Total	41		41	
Engineering	Computing	8	69-70	6	69-70
	Engg. Foundation	29		30	
	Major Based Core (Breadth)	24		24	
	Major Based Core (Depth)	18-20		18-20	
	IDBE (Electives)	7-8		7-8	
	Senior Design Project	6		6	
	Industrial Training (Summer)	0		0	
	Sub Total	92 – 95		91 – 94	
	Total	133 – 136	100	132 – 135	100

2.6 Laboratories and other Facilities

Laboratories is an integrated part of most of the theory courses. The laboratories in the department have state-of-the-art equipment for fulfilling the needs of the modern era. The lab sessions are designed in order to enhance the concepts studied in the theoretical session, to gain hands-on experience and to explore the practical applications of the subject. The department has ten (10)

dedicated laboratories which have state-of-the art equipment to fulfill the needs of the program. The list of the Labs is given below:

1. Basic Electronics Lab
2. Advanced Electronics Lab
3. Embedded Systems Lab
4. Instrumentation and Measurement Lab
5. Control Systems Lab
6. Digital Signal Processing and Communication Lab
7. Biomedical Signal Processing Lab
8. VLSI Design Lab
9. Computer Simulations Lab
10. Workshop/Project Lab

The Electrical Machines and Industrial Automation labs have been shared with the Electrical Engineering Department within the Faculty. *Currently the department is designing its own trainers for the Power Electronics lab*.

2.7 Outcome Based Education Implementation

The Department started to work on Outcome Based Education (OBE) based system in 2015 by considering the guidelines given by PEC in its OBA manual. The Department is the pioneer for the implementation of OBE system at UET, Taxila. Currently, OBE system is functioning in its true sense under the following three committees:

- Program Committee
- Subject/CQI Committee
- Assessment/ Analysis Committee

The summary of the OBE activities during 2024-2025 by the department of Electronics Engineering are given below in table 5.

Table 5 List of OBE Activities during 2024-2025

Assessment Committee	Semester	Date	Activities
	Spring-2024	28-05-2024	Reviewed Course Folders for Spring-2024
	Fall-2024	06-02-2025	Reviewed Course Folders for Fall-2024
Subject/CQI Committee	Spring-2024	10-09-2024	Reviewed Course Folders for Spring-2024
	Fall-2024	18-03-2025	Reviewed Course Folders for Fall-2024
Program Committee	Spring-2024	18-09-2024	Reviewed Course Folders for Spring-2024
	Fall-2024	16-04-2025	Reviewed Course Folders Fall-2024

2.8 Industrial Advisory Board Activities

The department has an active Industrial Advisory Board (IAB) in which professional engineers working in various engineering organizations are included. Industrialists being the stakeholder, share their recommendations

related to program educational objectives, curriculum etc. The summary of the IAB activities during 2024-2025 in the department are given in table 6.

Table 6 Meetings of Board of Industrial Advisory Studies during 2024-2025		
Sr. No	Meeting No.	Date
01	1/2024	22-04-2024
02	2/2024	04-12-2024
03	1/2025	04-02-2025
04	2/2025	10-04-2025

2.9 Board of Undergraduate Studies Activities

The department has an active Board of Undergraduate Studies (BoUGS). Board being the stakeholder, share their recommendations related to program educational objectives, curriculum development etc. The summary of the BoUGS activities during 2024-2025 in the department are given in table 7.

Table 7 Meetings of Board of Undergraduate Studies during 2024-2025		
Sr. No	Meeting No.	Date
01	1/2024	30-04-2024
02	2/2024	16-08-2024
03	3/2024	05-12-2024
04	1/2025	06-02-2025
05	2/2025	14-04-2025

2.10 Board of Postgraduate Studies Activities

The department has an active Board of Postgraduate Studies (BoPGS). Board being the stakeholder, share their recommendations related to program educational objectives, curriculum development etc. The summary of the BoPGS activities during 2024-2025 in the department are given in table 8.

Table 8 Meetings of Board of Postgraduate Studies during 2024-2025		
Sr. No	Meeting No.	Date
01	1/2024	12-02-2024
02	2/2024	09-05-2024
03	3/2024	05-09-2024
04	1/2025	19-12-2024
05	2/2025	06-02-2025

2.11 Academic Council Approvals

With reference to the recommendations of the IAB, BoUGS, BoPGS and Board of Faculty (BoF) meetings, the following agenda items were approved in Academic Council (AC) meetings related to Electronics Engineering Department as shown in table 9.

Table 9 ENCD Agenda items in Academic Council during 2024-2025		
Sr. No	Meeting No.	Approvals of ENCD Items
01	61/2025	1 Revision of BSc. Curriculum 2 Revision of PhD. Curriculum
02	60/2025	1 Approval for forwarding the post-facto NOC request to HEC about ENCD MSc/PhD admission

2.12 Students Teacher Ratio

The detail of student teacher ratio is shown in table 10.

Table 10 Student Teacher Ratio	
Session	Current Strength
2K21	44
2K22	45
2K23	47
2K24	47
Total	183
Full-Time Dedicated Faculty (FTDF)	10
Shared Faulty	3 (25% of FTDF = 3)
TAs/RAs	0 (9*0.5=4.5; 20% of FTDF = 2)
Student Teacher Ratio	183/(10+3)=14.077

2.13 Final Year Project

The Sustainable Development Goals (SDGs) based Final Year Project (FYP) provides students with the opportunity to apply their engineering knowledge to design and implement an effective and efficient solution to a Complex Engineering Problem (CEP) that is beneficial in both societal and environmental contexts. In addition to technical expertise, students learn by application many valuable skills including project planning and management, teamwork, engineering ethics and effective presentation skills that are essential to any professional engineering career. Students are evaluated through different criteria such as:

Extent of related engineering knowledge, literature review and research skills, project planning and management, development, and analysis of the design solution of the complex problem, implementation of the design solution, report writing and presentation skills and work ethics.

The evaluation of FYP is completed through various components such as project proposal, presentations, report, and project demo. In the 6th semester the student is required to submit the project proposal and also to present his proposal and work in Mid-semester and End-semester presentations. In 7th & 8th semester the student is required to submit the final project report and must give an End semester presentation and the Oral examination of the Project. The

evaluation of each component is done through rubrics. The list of 2K20 & 2K21 Session project is given in **(Annex-1**).

2.14 Internship

The Departmental placement office facilitates students to complete their 6-8 week internship in different industries in public as well as in private sectors and R&D organizations with an aim to identify the prospective employers, jobs, scholarships and industrial training for university students. In order to accomplish the goal of University Placement Office, Department of Electronics Engineering has also constituted a Committee to contact with public and private sector companies to generate internship opportunities for its students. The industries in which students completed their internship in 2024-2025 are given in **(Annex-2)**.

2.15 Industrial Linkages

Recognizing the importance of industrial linkages, the department has been continuously striving to connect to the industry through the participation of industry experts in its various academic bodies. The different departmental activities for strengthening industrial linkages during 2024-2025 are summarized in table 11.

Table 11 Departmental Activities for Strengthening Industrial Linkages during (2024-2025)

Sr. No.	Initiative/Activity	Details	Industry involved
1	Meetups for industrial linkages	Electronics department team meeting at NECOP (Islamabad) to discuss collaborative projects in the domain of 3-D IC packaging and MMIC design	RFICD, NECOP
2	Collaborative projects & Joint academia-industry publications	K. Habib, B. Aslam, I. Nelson, U. H. Khan, M. Kashif, Y. Amin, and H. Tenhunen, "Compact high gain and high isolation AMC-coupled MIMO antenna for wideband 5G millimeter wave applications," Opt. Quantum Electron., 2024 DOI: 10.1007/s11082-024-07628-5.	AWC, Wah Cantt.
		T. Gul, B. Aslam, U. H. Khan, M. Kashif, and M. I. Baig, "Design and Analysis of SIW Iris Bandpass Filters for Ku-Band Applications," Proceedings of ICET, GIKI, Pakistan, 2024	
3	R&D Activities, Industry-funded projects, and Research grants	RAC project: Design and Development of MMIC power amplifier for radar applications (Phase-1) [Tentatively starting in June 2025]	NECOP, Islamabad

		NRPU grant: Applied against the project Design and Development of MMIC power amplifier for radar applications (Under review)	NECOP, Islamabad
		NRPU grant: Applied against the project titled Biometric Authentication using Physiological Signals and Artificial Intelligence (Under review)	NADRA
		NRPU grant: Applied against the project titled Revolutionizing the Construction Industry Using AI-Driven Aerial Monitoring System (Under review)	Johannes Kepler University, Austria
		NRPU grant: Applied against the project titled Implementation of Deep Neural Network Accelerator for Edge Devices: Optimizing Energy Efficiency and Performance (Under review)	NECOP, Islamabad
		NRPU grant: Applied against the project titled Performance Optimization of Multilevel Converters for Solar PV Applications (Under review)	EED, UET Lahore
		NRPU grant: Applied against the project titled Intelligent Low Order Approximation for Efficient Deployment and Performance of Indigenous Multi-disciplinary Products in Pakistan (Under review)	NA
		NRPU grant: Applied against the project, Hybrid EEG-fNIRS BCI system for neurorehabilitation and assistive communication (Under review)	Rubina Hospital Kuthyala Mandibahudeen
		PC-1 of worth 52.96 million PKR submitted for the upgradation of Biomedical Engineering department labs (In process)	NA
		Proposal submitted to enhance the University ranking through foreign faculty engagement from the Electronics engineering perspective (In review)	NA
4	Industrial Workshops/Seminars	GaN High Electron Mobility Transistor-based Low-Noise and Power Amplifier MMICs	NDC, Islamabad
		Emerging trends in the	PMO,

		Semiconductor industry and IC design	Taxila
		An interactive session of final-year students with an industrial team	Advantest , Japan
5	Recruitment Drives	Recruitment test for Fauji Fertilizer Company (FCC), Limited	FCC, Pakistan
		Recruitment test for Lucky Cement	Lucky Cement, Karachi
		Recruitment test for Cotton Web, Limited	Cotton Web, Lahore
6	Industrial Visits	Study/Industrial tour of the ENCD for the students of the 2K22 session (6th semester)	Mangla Dam Power Plant, AJK
		Study/Industrial tour of the ENCD for the students of the 2k21 session (7th semester)	NIE, Islamabad

2.16 Student Societies

The Student Chapter of IEEE Consumer Electronics Society (IEEE-CES) was established in the department in 2015. The chapter provides ample opportunities for technical grooming of students in the department. It organizes various technical events related to current developments and future trends in the field of Electronics engineering and students are highly encouraged to participate. The detail of few events attended by students as shown in table 12.

Table 12 List of Student Societies Activities during 2024-2025

Sr. No.	Student Society Events	Date
1	Matric Students from Dar e Arqam School visited ENCD	24 April 2025
2	IEEE CTSoc UET Taxila Cabinet Handing Over Ceremony	14 April 2025
3	Students of Electronics Engineering Department presented research paper in conference on "Use of AI in Medical Science" held in Wah Medical College and secured 2nd position	11-13 April 2025
4	Electronics Engineering students from UET Taxila visited a primary school UET Taxila to engage 5th-grade students in a fun and educational session	10 April 2025
5	IEEE CTSoc UET Taxila Cabinet 2K25-26 interviews	6 March 2025
6	Ramadan Drive 2K25 – A Mission of Giving by Electronics Engineering Students in the entire month of Ramadan	Ramzan 2025
7	Official New IEEE SPS/EMBS Joint Chapter UET Taxila Formation in Electronics Department	25 March 2025

8	IEEE Advancing Technology for Humanity	24 March 2025
9	Trip to Toli Peer with IEEE CTSoc UET Taxila	22 February, 2025
10	IEEE CTSoc Annual General Meeting 2025	18 February 2025
11	Advantest Team Engages Final-Year Students in an Interactive Session at UET Taxila	17 February 2025
12	IEEE CTSoc UET Taxila has won the Best Chapter Award in Islamabad IEEE Section for the year 2024	17 January 2025
13	Engr. Ahmed Ali Saif , Dr.Zohaib Hassan Naqvi's Final Year Project (FYP) student has successfully presented his research article at the 26th International Multi-Topic Conference	30-31 December 2024
14	The Role of IEEE Student Branches in Professional Development & Career Growth	9 December 2024
15	Almohandis Literary Society UET, Taxila	31 October 2024
16	Mehfil-e-Zoq organized by the Electronics Engineering Department	10 October 2024
17	Seminar on Physiotherapy in our daily life & Sports by Dr. Saira Mehmood organized by the Electronics Engineering Department	19 September 2024
18	Community Services Event held in Sir Syed High School & College, Wah	18 September 2024
19	Seminar on Students Awarness about Freelancing organized by the Electronics Engineering Department	16 September 2024

2.17 Student Industrial Trips

The Department has arranged student Industrial trips during 2024-2025 as given in table 13.

Sr. No.	Table 13 List of ENCD Student Industrial Trips	Date
1	National Institute of Electronics, Islamabad on (2K21Session)	02-12-2024
2	WAPDA, Mangla Dam Power Plant, Mangla (2K22 Session)	20-02-2025

2.18 Community Services

The Department has arranged following Community Service activities during 2024-2025 as given in table 14.

Sr. No.	Table 14 List of Departmental Community Service Activities during 2024-2025	Date
1	Male Students of 9th grade from Dar-e-Arqam School, Wah Cantt were invited to share interest in the field of Electronics Engineering and they explored various engineering labs and observed practical demonstrations to gain exposure.	28/11/2024
2	Electronics Engineering students visited a primary school to engage 5th grade students in a fun and educational session. They introduced the basics of Artificial Intelligence and shared information about engineering careers. The session included interactive discussions and a quiz competition to make learning exciting and memorable for the young student.	10/04/2025
3	Female Students of 9th grade from Dar-e-Arqam School, Taxila Cantt were invited to share interest in the field of Electronics Engineering and they explored various engineering labs and observed practical demonstrations to gain exposure.	24/04/2025

2.19 CPD Activities

The Department has arranged following CPD activities during 2024-2025 as given in table 15.

Table 15 List of CPD Activities during 2024-2025				
S.No	CPD Title	CPD Points	Person	Date
1	Entrepreneurship for Engineers	0.5	Dr. Syed Zohaib H. Naqvi	16-04-2025
2	Introduction and Application of PLC's 0.5	0.5	Dr. Adil Usman	19-11-2024
3	Identification of Pulmonary Disease from Adventitious Lung Sounds	0.5	Dr. Syed Zohaib H. Naqvi	18-09-2024
4	Predictive Maintenance for Industry	0.5	Dr. M. Faraz	23-01-2024

2.20 EHS Activities

The Department has arranged following Environment, Health & Safety (EHS) activities during 2024-2025 as given in table 16.

S.No.	Table 16 List of Departmental EHS Activities	Date
1	Fire Extinguishers Training	17-04-2025
2	Fire Extinguishers Training	09-04-2025
3	Emergency Evacuation Drill	26-09-2024
4	Physiotherapy Seminar on Sports and Daily Life	19-09-2024
5	Plantation Drive	02-09-2024

2.21 New Facilities

The following new facilities have been established during 2024-2025:

1. Upgradation of all labs.
2. Installation of Security cameras in multiple labs and premises of the department.
3. EHS facilities have been further improved.
4. Dedicated praying room is established.
5. Renovation of classrooms, offices and corridor.
6. Refilling of the fire-extinguishers.
7. Provision of E-course folders.

2.22 Department website

The department website (https://web.uettaxila.edu.pk/EncED/index.asp) is updated on regular basis in order to help students and others to access and upload relevant information/data/activities/forms etc. The department website has following pages:

- About department
- Chairman Message
- Faculty/Staff
- Program Mission, PEOs, PLOs
- Academic Programs
- Accreditation History
- Labs Infrastructure
- Research Groups
- Faculty Development Program
- CPD Activities
- Workshop, Seminar & Trainings
- Academic Committees
- Internship Activities
- Promoting Entrepreneurship
- News & Events
- Departmental Placement Cell
- Industrial Link
- EHS Activities
- Societies Activities
- Sports Activities
- Student Counseling

3 Postgraduate Program

The department was mandated by the University to start its postgraduate program in 2014. At present, it has an academic staff of 15, including 10 faculty members, involved in postgraduate teaching and research work. Under this program, the following degrees will be offered:

- Master of Science in Electronics Engineering
- Doctor of Philosophy in Electronics Engineering

The department offers both MSc. and PhD. postgraduate programs recognized by the HEC with the following specializations:

i. Electronics System Design
ii. Microelectronic Materials and Devices
iii. Biomedical Electronics

The courses contain a balance of professional as well as research aspects and are designed to cater the needs of fresh graduates pursuing career development in both industry and research domains. The ENCD is highly qualified and holds diverse research interests. In addition to their academic responsibilities, the faculty is actively involved in conducting quality research in their respective areas of investigation.

3.1 Different Activities

The list of different activities related to postgraduate programs are given below:

- The list of enrollment in MSc/PhD. Program during 2024-2025 in Electronics Engineering is given in table 17.

Table 17 List of enrollment in MSc/PhD. Program in Electronics Engineering

Semester	Applications	Entry Test	Interview	Merit List	Registered
MS-Fall-2023	3	0	0	0	0
MS-Spring-2024	0	0	0	0	0
MS-Fall-2024	5	5	5	5	2
MS-Spring-2025	0	0	0	0	0
PhD-Fall-2023	0	0	0	0	0
PhD -Spring-2024	0	0	0	0	0
PhD -Fall-2024	1	1	1	1	1
PhD -Spring-2025	0	0	0	0	0

- The list of courses offered in Spring/Fall-2024-2025 semesters are given in table 18.

Table 18 List of MSc/PhD Courses offered in Fall-2024					
S.no	Course Code	Course Name	Teacher Name	Teacher	Specialization
1	EN-5003	Linear System Theory	Dr. Khawaja Shafiq Haider	Internal	Common to all
2	EN-5115	Nonlinear Systems	Dr. Hammad Zaki	Elective	Electronics System Design
3	EN-5118	Optimization Theory	Dr. Khawaja Shafiq Haider	Elective	Electronics System Design
List of MSc/PhD Courses offered in Spring-2025					
1	EN-6001	Advanced Engineering Mathematics	Prof. Dr. Yaseer Arafat Durrani	Internal	Common to all
2	EN-6003	Advanced Linear System Theory	Dr. Khawaja Shafiq Haider	Internal	Common to all
3	EN-6115	Advanced Nonlinear Systems	Dr. Hammad Zaki	Elective	Electronics System Design

- The list of other activities related to HEC/QEC during 2024-2025 are given in table 19.

Table 19 HEC Self-Assessment Process of MSc/PhD Programs (2nd Cycle)		
Sr. No	Related Activities	Date
1	Initiation of 2nd Cycle of Self-Assessment Process of MSc/PhD Programs by QEC, UET Taxila	Nov. 2023
2	Nomination of Program Team for Preparation of Self-Assessment Report (SAR) of MSc and PhD by department	23-11-2023
3	Notification of Program Team for SAR Preparation of MSc Program by Registrar	20-12-2023
4	Notification of Program Team for SAR Preparation of PhD Program by Registrar	20-12-2023
5	Submission of Final MSc and PhD SARs to QEC	06-05-2024
6	Notification of Assessment Team Members for Evaluation of SAR of MSc and PhD Programs by Registrar Office	24-06-2024
7	Self-Postgraduate Program Review Visit of PhD Program by Assessment Team	28-06-2024
8	Self-Postgraduate Program Review Visit of MSc Program by Assessment Team	29-06-2024
9	Approval for Forwarding the post-facto NoC request to HEC about MSc & PhD Admissions in Electronics	Case sent to ASRTD on

	Engineering Department during Fall-2014 & Fall-2015 sessions. Recommended by Board of ASR&TD in 32/2024 Meeting Recommended by Academic Council in 60/2025 meeting on 20-01-2025 Recommended by Syndicate in its 70/2025 meeting.	31-10-2024
10	Request for Submission of Revised NoC case for MSc & PhD programs in Electronics Engineering for Fall-2014 and Fall-2015 intakes to HEC Approval from Registrar Office Submission of Dossiers for Revised NoC case to HEC by QEC	Sent to Registrar 13-03-2025 08-04-2025 23-04-2025

3.1 Research Facilities and Groups:

Research training is core part of our graduate program. All Postgraduate students are required to complete research thesis culminating in research publication in high-impact factor journals. To facilitate in their research activities, all Postgraduate students are provided with dedicated state-of-the-art computers, high-speed internet access, subscriptions to many quality journal publications as well as full-time access to research labs. At present the department has three main research groups active in the following key areas:

1) Electronics System Design Research Group:

This group is working in areas such as SoC Design, VLSI Design, FPGA-based Design and Mixed Signal Design. The following faculty members are part of this research group:

1. Prof. Dr Yaseer Arafat Durrani
2. Dr. Azhar Ali Zaidi
3. Dr. M. Faraz
4. Engr. Tahir Iqbal
5. Engr. Tahir Khan
6. Engr. Mishab Younus

2) Electromagnetics and Optics Research Group:

This group is working primarily in areas such as Electromagnetic Field Theory, Laser and Fiber Optics Design and Metamaterials. The following faculty members are part of this research group:

1. Dr. Aamir Rashid
2. Dr. Bilal Aslam
3. Dr. M. Faraz

3) Control & Automation Research Group:

This group is working on analysis and design of Control & Automation related research activities. The following faculty members are part of this research group:

1. Dr. Hammad Zaki
2. Dr. Khawaja Shafiq Haider
3. Dr. Sadaqat Ali
4. Engr. M. Atif Imtiaz
5. Engr. M. Umar Khan

4) Power Electronics Research Group:

This group is working on analysis and design of Power Electronics related research activities. The following faculty members are part of this research group:

1. Dr. Adil Usman
2. Dr. Sajjad Ahmed
3. Engr. Shujjat Hussain Shah

5) Biomedical Electronics Research Group:

This group is working on analysis and design of Biomedical Electronics related research activities. The following faculty members are part of this research group:

1. Dr. Syed Zohaib Hassan Naqvi
2. Dr. M. Faraz
3. Engr. Sumair Aziz
4. Engr. M. Umar Khan

3.2 Faculty Development Programs

The university grants maximum four years study leave with full/half pay for higher studies under the Faculty Development Program (FDP). Currently five faculty members from Electronics Engineering department are aboard under the university FDP program. The detail is shown in table 20.

Table 20 List of faculty members under FDP program

Sr. No.	Faculty Members	Designation	Location	Duration
1	Engr. Qammar Zaman	Lecturer	Tech. Uni. of Kaiserslautern Germany	Feb. 2018 till to date
2	Engr. Atif Imtiaz	Lecturer	Uni. of Wollongong Australia	March 2022-till to date
3	Engr. Misbah Younus	Lab. Engg.	Luxembourg Inst. of Sci. & Tech. Luxembourg	July 2022 till to date
4	Engr. M. Umar Khan	Lab. Engg.	University of Canberra, Australia	Feb 2024 till to date
5	Engr. Sumair Aziz	Lab. Engg.	University of Canberra, Australia	March 2024 till to date

3.3 Publications

The faculty members are actively involved in research. The list of publications during 2024-2025 is shown in (**Annex-3)**.

4 Biomedical Engineering Technology Program

Under the umbrella of the Faculty of Electronics & Electrical Engineering (FE&EE), the department has applied to National Technology Council (NTC), Islamabad for resumption of Bachelor of Engineering Technology (Biomedical) Program. Consequently, zero visit of NTC team was conducted on (4-5 Nov. 2024) for resumption of program and NTC has granted the provisional permission to start Bachelor of Engineering Technology (Biomedical) Program vide their letter no. F. No. NTC/12/02/ZV dated 20-3-2025.

(Prof. Dr. Yaseer Arafat Durrani)
Chairman ENCD

(Annex-1)
Department of Electronics Engineering
List of Final Year Projects (2K21 Session)

Sr. No	Student Reg #	Student Name	Topic	SDG Number	Advisor
1	21-ENC-20	M Huzaifa	Design of Virtual Reality Headset	SDG- 9 and 12	Dr. Yaseer A. Durrani
	21-ENC25	M Hamza Shafiq			
2	21-ENC-01	Sumama Mir	Design and Implementation of 32-bit pipelined RISC-V Processor.	SDG- 8 and 11	Dr. Azhar Ali Zaidi
	21-ENC-09	Ayesha Qamar			
3	21-ENC-52	Laraib Tahir	Implementation of an Authentication Protocol for IoT-based Applications on FPGA	SDG 8 and 11	Dr. Azhar Ali Zaidi
	21-ENC-61	Arslan Malik			
4	21-ENC-24	Arqam Bin Muneer	Controller design for a system (Simulation and Hardware based)	SDG- 9 and 12	Dr. Khawaja Shafiq Haider
	21-ENC-39	Saifullah Hameed			
5	21-ENC-11	Mehak Hassan	Model order reduction of large scale systems (Research based)	SDG-7 and 9	Dr. Khawaja Shafiq Haider
	21-ENC-14	Hoorya Aslam			
6	21-ENC-23	M Abu Akasha	Solar Water Pumping System with Sun Tracker Using Programmable Logic Controller (PLC)	SDG 2 and 9	Dr. Hammad Zaki
	21-ENC-42	Bilal Humayun			
7	21-ENC-16	M Uzair	Agricultural Robot	SDG 2 and 9	Dr. Hammad Zaki
	21-ENC-64	Jamal Khan			
8	21-ENC-12	M Ahmad	UHF RFID Tags Mountable on Metallic and Challenging Objects	SDG- 9 and 12	Dr. Bilal Aslam
	21-ENC-53	Shaheer Ullah Khan			
9	21-ENC-36	Amna Nawaz	Fully Printed Chipless RFID Tags for Item-Level Tracking Applications	SDG 9 and 12	Dr. Bilal Aslam
	21-ENC-44	Hajra Bibi			
10	21-ENC-40	Anzla Iman	Planar MIMO antenna for mm-Wave applications	SDG 9 and 12	Dr. Bilal Aslam
	21-ENC-45	Aimen Safdar			
11	21-ENC-08	Syeda Zainab	Sleep Disorder Detection using Machine Learning	SDG 3	Dr. Zohaib Hassan
	21-ENC-22	Haris Anwar			
12	21-ENC-18	M Kaif	Glucose-Level Monitoring through PPG Signals using	SDG 3	Dr. Zohaib Hassan
	21-ENC-29	Esha Usman			

			Machine Learning Techniques		
13	21-ENC-35 21-ENC-47	M Talah Ahmed Mujtaba Kayani	Monitoring System for the Cardiovascular disorders	SDG 3	Dr. Zohaib Hassan
14	21-ENC-02 21-ENC-21	Hassan Huzaifa Talha Bin Tahir	Power Transformer Fault Diagnosis System	SDG 9	Dr. Adil Usman
15	21-ENC-04 21-ENC-13	Tuba Alvi Yumna Aziz	Biometric Authentication System using Bio Signals and Artificial Intelligence	SDG 9 and16	Dr. M Faraz
16	21-ENC-03 21-ENC-05	Laraib Imtiaz Shanzay Amjad	Artificial Intelligence based Machine Faults Diagnostic system	SDG 9 and 16	Dr. M Faraz
17	21-ENC-19 21-ENC-49	Rehman Ali Butt Hassan Iqbal	Development of a High-Efficiency Electric Vehicle Charging System	SDG 7, 9 and 13	Dr. Sajjad Ahmed
18	21-ENC-54 21-ENC-57	M Umair Amjad Ali Hammad Ghani	Design and Implementation of a Solar Power Inverter	SDG 7, 9 and 13	Dr. Sajjad Ahmed
19	21-ENC-38	Syed Masab	Accurate Sleep Disorder identification using ML models on ECG Signals	SDG 3	Dr. Sajjad Ahmed
20	21-ENC-58 21-ENC-63	M Mutahhar Baig M Huzaifa Saeed	Design and Development of Agri-Rover for Crop Management	SDG 9	Engr. Tahir Iqbal
21	21-ENC-10 21-ENC-43	Babar Ali Yasir Ali	Automatic Car Washing Machine and Water Recycling System using PLC	SDG 9	Engr. Tahir Iqbal
Department of Electronics Engineering List of Final Year Projects (2K22 Session)					
Sr. No	Student Reg #	Student Name	Topic	SDG Number	Advisor
1	22-ENC-44 22-ENC-16	Khawar Hayat Khilji Muhammad Zohaib	Unmanned Vehicle for Underwater Surveillance System	SDG- 6 and 14	Dr. Yaseer A. Durrani
2	22-ENC-01 22-ENC-43 22-ENC-47	Umair Mushtaq Wadood Ul Haq Saad Ali	The Design of High Precision of Digital Multimeter (DMM)	SDG- 9	Dr. Yaseer A. Durrani
3	22-ENC-06	Muhammad	Implementation of an	SDG- 8	Dr. Azhar

		Haseeb	optimized DNN accelerator on a resource constrained FPGA	and 11	Ali Zaidi
	22-ENC-18	Muhammad Awais			
4	22-ENC-02	Arslan Tariq	Implementation of an Authentication Protocol for IoT-based Applications on FPGA	SDG 8 and 11	Dr. Azhar Ali Zaidi
	22-ENC-09	M Ijlal Abbas Haider			
5	22-ENC-22	Tehreem Fatima	Model order reduction of large scale systems (Research based)	SDG- 9 and 12	Dr. Khawaja Shafiq Haider
	22-ENC-23	Sawera Khaliq			
6	22-ENC-33	M Hamid Faisal	Controller Design for a system	SDG 2 and 9	Dr. Khawaja Shafiq Haider
	22-ENC-29	Hassan Ali			
7	22-ENC-11	Ali Haider	PATIENT BALANCE MONITORING SYSTEM USING INERTIAL SENSOR	SDG 3 and 9	Dr. Hammad Zaki
	22-ENC-21	Harman Ali			
8	22-ENC-19	Muhammad Raza Nawaz	Compact planar circularly polarized antenna for emerging wideband Internet of Things applications	SDG- 9	Dr. Bilal Aslam
	22-ENC-08	Mamoon Anwar			
9	22-ENC-07	Maha Adeen	Minimally Coupled MIMO Antenna with Dual Band (28/38 GHz) for 5G Wireless Communications	SDG 9 and 12	Dr. Bilal Aslam
	22-ENC-45	Nabeel Hassan			
10	22-ENC-12	Muhammad Ali	Smart Air Quality Monitoring System	SDG 3	Dr. Zohaib Hassan
	22-ENC-05	Ahamed Raafiq			
11	22-ENC-04	M Shaheer Ahmed	Power Transformer Fault Diagnosis System (Part-2)	SDG 9	Dr. Zohaib Hassan
	22-ENC-28	Zain ul Abideen			
12	22-ENC-15	Muhammad Hashim	Intelligent System for Identification of Sleep Syndrome	SDG 3	Dr. Adil Usman
	22-ENC-20	Hassan Ali			
13	22-ENC-31	Awaim Saleem	Power Electronics System Phase II	SDG 9	Dr. Adil Usman & Engr. Tahir Iqbal
	21-ENC-35	Aaftab Ahmad			
14	22-ENC-10	Syeda Urwa Tul Wusqa	Biometric Authentication System using Bio Signals and Artificial Intelligence	SDG 9 and16	Dr. M Faraz
	22-ENC-26	Aleena Aamir			
15	22-ENC-03	Khadija Munir	Artificial Intelligence based Machine	SDG 9	Dr. M Faraz
	22-ENC-32	Hifza Nisar			

			Faults Diagnostic system		
16	22-ENC-48 22-ENC-38	Abdul Ahad Shahzaib Ejaz	Development of a High-Efficiency Electric Vehicle Charging System	SDG 7, 9 and 13	Dr. Sajjad Ahmed
17	22-ENC-37 22-ENC-39	Umar Nadeem Haider Muhammad Shahid	Design and Implementation of a Microcontroller based Power Supply	SDG 7, and 9	Dr. Sajjad Ahmed
18	22-ENC-36 22-ENC-41	Talha Liaqat Hafsa Faraz	Design and Thermal Estimation of RISC-V processor	SDG 9	Engr. Tahir Iqbal

(Annex-2)

List of Industry Performed Internship of 2K21 Session

S.No.	Reg.No.	Name	Organization	Status
1	21-ENC-001	Sumama Mir		
2	21-ENC-002	Hassaan Huzaifa	NIE Islamabad	Complete
3	21-ENC-003	Laraib Imtiaz		
4	21-ENC-004	Tuba Alvi		
5	21-ENC-005	Shanzay Amjad		
6	21-ENC-008	Syeda Zainab Mousavi		
7	21-ENC-009	Ayesha Qamar	NIE Islamabad	Complete
8	21-ENC-010	Babar Ali Bukhari		
9	21-ENC-011	Mehak Hassan	NIE Islamabad	Complete
10	21-ENC-012	Muhammad Ahmad		
11	21-ENC-013	Yumna Aziz		
12	21-ENC-014	Hoorya Aslam	Orchard Tech.	Incomplete
13	21-ENC-016	Muhammad Uzair		
14	21-ENC-017	Ahmad Raza		
15	21-ENC-018	Muhammad Kaif	NIE Islamabad	
16	21-ENC-019	Rehman Ali Butt	PTCL Sialkot	Complete
17	21-ENC-020	Muhammad Huzaifa	POF Wah	Complete
18	21-ENC-021	Talha Bin Tahir		
19	21-ENC-022	Haris Anwar	NIE Islamabad	
20	21-ENC-023	Muhammad Abu Akasha		
21	21-ENC-024	Arqam Bin Muneer		
22	21-ENC-025	Muhammad Hamza Shafiq	IESCO Islamabad	Complete
23	21-ENC-029	Esha Usman	NIE Islamabad	
24	21-ENC-035	Muhammad Talha		
25	21-ENC-036	Amna Nawaz	POF Wah	Complete
26	21-ENC-038	Syed Masab Bin Majid	NDC Islamabad	Complete

27	21-ENC-039	Saif Ullah Hameed		
28	21-ENC-040	Anzla Iman		
29	21-ENC-042	Bilal Humayun		
30	21-ENC-043	Yasir Ali	POF Wah	Complete
31	21-ENC-044	Hajra Bibi		
32	21-ENC-045	Aimen Safdar	Orchard Tech	
33	21-ENC-047	Ahmed Mujtaba Kayani	g and Trade Services	Complete
34	21-ENC-049	Hassan Iqbal	IESCO Islamabad	Complete
35	21-ENC-052	Laraib Tahir		
36	21-ENC-053	Shaheer Ullah Khan		
37	21-ENC-054	Muhammad Umair Amjad	IESCO Islamabad	Complete
38	21-ENC-057	Ali Hammad Ghani	IESCO Islamabad	Complete
39	21-ENC-058	Muhammad Mutahhar Baig		
40	21-ENC-061	Muhammad Arslan Malik	IESCO Islamabad	Complete
41	21-ENC-063	Muhammad Huzaifa Saeed	IESCO Islamabad	Complete
42	21-ENC-064	Jamal Khan		
List of Industry Performed Internship of 2K20 Session				
S.No.	Reg.No.	Name	Organization	Status
1	20-ENC-1	SYEDA TEHREEM HAIDER	Wah Brass Mills Wah Cantt	
2	20-ENC-3	MALIKA LARAIB UL HUDDA	SEED Taxila	Complete
3	20-ENC-4	FARAZ KASHIF		
4	20-ENC-5	HAMID MAHMOOD		
5	20-ENC-6	MUHAMMAD BILAL SAJID	NECOP Islamabad	Complete
6	20-ENC-7	WARDAH BATOOL	SEED Taxila	Complete
7	20-ENC-8	SIKANDAR SULTAN ABBASI	PTCL Islambad	Complete
8	20-ENC-9	JUNAID KHALID	PTCL Islambad	
9	20-ENC-10	WAQAS AHMAD	HIT Taxila	Complete
10	20-ENC-11	FAIZA AFZAL	SEED Taxila	Complete
11	20-ENC-12	TAQI UR RAHMAN	NCDC Islamabad	
12	20-ENC-13	M BAKHTAWAR KHAN	Horizon Tech Services Isl.	Complete
13	20-ENC-14	ABDUL HANNAN	SEED Taxila	Complete
14	20-ENC-17	MALAIKA SUMBLE	HIT Taxila	
15	20-ENC-18	MUHAMMAD HAMZA ASLAM	PTCL Islambad	

16	20-ENC-19	MUHAMMAD ZAID	PTCL Taxila	Complete
17	20-ENC-20	SYEDA MISHKAT HASSAN	SEED Taxila	Complete
18	20-ENC-21	ABDUL REHMAN	PTCL Taxila	complete
19	20-ENC-22	ASAD MEHMOOD	SEED Taxila	Complete
20	20-ENC-23	MUHAMMAD BINYAMIN		
21	20-ENC-24	RAJA ASIM MUSTAFA		
22	20-ENC-25	NOMAN MASUD	PTCL Islambad	Complete
23	20-ENC-26	MUHAMMAD FAIZAN SARWAR	SEED Taxila	Complete
24	20-ENC-27	RABIA NASEER		
25	20-ENC-28	MUHAMMAD USMAN AKRAM	IESCO Islamabad	
26	20-ENC-30	MUHAMMAD UMER ZULFIQAR	PTCL Islambad	Complete
27	20-ENC-31	ABDUL REHMAN KHAN	PTCL Rawalpindi	Complete
28	20-ENC-32	ABDUL REHMAN		
29	20-ENC-33	SHAHZAD ARSHAD	PTCL Rawalpindi	Complete
30	20-ENC-34	OWAIS FAYAZ	PTCL lahore	Complete
31	20-ENC-36	MOAZAM ALI TAHIR	HIT Taxila	Complete
32	20-ENC-37	ASIMA AZAM	SYSTAFF Islamabad	Complete
33	20-ENC-38	Hafiz Hamza	PTCL Islambad	Complete
34	20-ENC-39	HAFIZ ABDULBASIT	PTCL Rawalpindi	Complete
35	20-ENC-40	MUHAMMAD RAHBER SAEED		
36	20-ENC-44	Abdullah Nawaz		
37	20-ENC-46	M Tauheed Hussain	SEED Taxila	Complete
38	20-ENC-47	AHMED ALI SAIF	PTCL Rawalpindi	Complete
39	20-ENC-49	MUHAMMAD HANZLA AFZAL		
40	20-ENC-50	HASSAAN AHMAD		
41	20-ENC-51	AMIR KHAN	Sol Pakistan	Complete

(ANNEX-3)

List of Publications (2024-2025)

Journal Publications:

1. Malik, Abdul, Tahir Mehmood Bhatti, Syed Zohaib Hassan Naqvi, Sehreish Abrar, Faisal Nazeer, and Abdullah G. Al-Sehemi. "A new way to analyze constitutive analysis and its relation to the microstructure of a Mg-Gd-Y-Zn alloy."Journal of Alloys and Compounds (2024).
2. Habib, Kanwal, Bilal Aslam, I. Nelson, Umar Hasan Khan, Muhammad Kashif, Y. Amin, H. Tenhunen. "Compact high gain and high isolation AMC-coupled MIMO antenna for wideband 5G millimeter wave applications."Optical and Quantum Electronics 56, no. 10 (2024): 1740.
3. Zaki, Hammad, Aamir Rashid, and Usman Masud. "Lyapunov-based fractional-order PID controller design for coupled nonlinear system." Transactions of the Institute of Measurement and Control 47, no. 6 (2025): 1046-1056.
4. Malik, Abdul, Tahir Mehmood Bhatti, Syed Zohaib Hassan Naqvi, Sehreish Abrar, Faisal Nazeer, and Abdullah G. Al-Sehemi. "A new way to analyze constitutive analysis and its relation to the microstructure of a Mg-Gd-Y-Zn alloy." Journal of Alloys and Compounds, 977 (2024): 173456.
5. Alvi, Tuba, Yumna Aziz, Muhammad Faraz, Zubair Mehmood, Syed Zohaib Hassan, and Laraib Imtiaz Naqvi. "Bio fusion: Advancing Biometric Authentication by Fusion of Physiological Signals." (2025).
6. Sumair Aziz, Muhammad Umar Khan, Adil Usman, Muhammad Faraz, Yazeed Yasin Ghadi, and Gabriel Axel Montes. "Bearing faults classification using novel log energy-based empirical mode decomposition and machine Mel-frequency cepstral coefficients." Digital Signal Processing 156 (2025): 104776.
7. Azher Ali, anti UAV a large scale 4k benchmark dataset for vision-based drone detection in high resolution imagery (IEEE Access accepted)
8. Ahmad, Tanveer, Xue Jun Li, Muhammad Ashfaq, Michalis Savva, Iacovos Ioannou, and Vasos Vassiliou. "Location-enabled IoT (LE-IoT): Indoor localization for IoT environments using machine learning." 20th International Conference on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT), pp. 392-399. IEEE, 2024.

Conferences Publications:

1. M. Sudais Khan, Yaseer A. Durrani, 2nd International Conference on Innovations in Computing Technologies & Information Sciences (ICTIS-2025), Peshawar 29-30 April 2025

2. M. Sudais Khan, Yaseer A. Durrani, “A Review of Optimization Techniques in Network-on-Chip (NoC) Architecture” IEEE International Conference on Engineering & Computing Technologies, Islamabad, May 2024.
3. Khan, M. Bakhtawar, M. Faraz, Syed Zohaib H. Naqvi, and Adil Usman. "Identification of Bearing Faults Through Vibrational Signal Analysis Using Automated Relative Energy based Empirical Mode Decomposition." 19th International Conference on Emerging Technologies (ICET), pp. 1-6. IEEE, 2024.
4. Mehmood, Asad, Norah Abdullah Ondus, M. Faraz, and Syed Zohaib Hassan Naqvi. "Deep Learning-Based MRI Image Classification for Early-Stage Alzheimer's Disease Diagnosis." 19th International Conference on Emerging Technologies (ICET), pp. 1-6. IEEE, 2024.
5. Afzal, Faiza, Syed Zohaib H. Naqvi, and M. Faraz. "Dermoscopic Image Analysis for Skin Cancer Detection Using Deep Features and Support Vector Machines." 19th International Conference on Emerging Technologies (ICET), pp. 1-6. IEEE, 2024.
6. Khan, Shujahat Ali, M. Adnan, Ahtasham Ali, Ali Raza, Asim Ali, Syed Zohaib H. Naqvi, and Tehseen Hussain. "An android applications vulnerability analysis using MobSF." International Conference on Engineering & Computing Technologies (ICECT), pp. 1-7. IEEE, 2024.
7. Rafay, Abdul, Wardah Batool, M. Faraz, Syed Zohaib H. Naqvi, Muhammad Umar Khan, and Sumair Aziz. "Detecting Lung Infections with Empirical Mode Decomposition and Neural Networks." In 2024 5th International Conference on Advancements in Computational Sciences (ICACS), pp. 1-6. IEEE, 2024.
8. M. Ashfaq, Tanveer Ahmad, Asim Anwar, Azeem Irshad, Ian B. Benitez, and M. Murtaza. "Optimizing message delivery in opportunistic networks with replication-based forwarding." In 2024 International Conference on Engineering & Computing Technologies (ICECT), pp. 01-07. IEEE, 2024.
9. M. Ashfaq, Siti Nur. "IoT Sensor Networks-Orchestrating Connectivity, Efficiency, and Intelligence Across Diverse Domains." Int. J. Innov. Res. Comput. Sci. Technol 12, no. 3 (2024): 154-161.
10. Khan, M. Bakhtawar, M. Faraz, S. Zohaib H. Naqvi, and Adil Usman. "Identification of Bearing Faults Through Vibrational Signal Analysis Using Automated Relative Energy based Empirical Mode Decomposition." 19th International Conference on Emerging Technologies (ICET), pp. 1-6. IEEE, 2024.